

Lecture Notes in Networks and Systems 621

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Digitalisation: Opportunities and Challenges for Business

Volume 2

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Editors

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Preface

We are delighted to write this Foreword for the International Conference on Business and Technology (ICBT'22) proceedings. I deeply believe in the role of such a conference and other similar scientific forums in bringing together leading academicians, scholars, and researchers to share their knowledge and new ideas as well as to discuss current developments in the fields of economics, business, and technology. ICBT'22 provides a valuable window on the implementation of technology such as artificial intelligence, IoT, and innovation in business development. For two days, a large number of distinguished researchers and guest speakers discussed many contemporary issues in business and technology around the world. We have a strong faith that this book will be of great benefit for many parties, especially those aspiring to develop buoyant strategies that will lead to positive impact on any future endeavors. Finally, I hope that the ICBT'22 continues as a destination for researchers, postgraduate students, and industrial professionals.

Bahaaeddin Alareeni
Allam Hamdan

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Marketing, E-commerce and Digitalization



The Impact of Organizational Justice on Organizational Trust: Examining the Moderating Role of Job Security: A Study at the Jordanian Insurance Companies

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Abstract. The study aimed to examine the impact of Organizational justice in terms (distributive, procedural, and interactional justice) on organizational trust: the moderating role of job security at Jordanian Insurance Companies. The quantitative analytical descriptive method was used. 19 Jordanian Insurance companies participated in the study out of 22 companies operating in the Jordanian market. The sampling unit consisted of middle and first-line management, working at all the companies' branches, a random sample of 360 was selected. For collecting the needed information and data the questionnaire was used, 360 questionnaires were distributed, and 319 were valid for statistical analysis. The main findings of the study revealed that there is a statistically significant impact of organizational justice on organizational trust, and job security as a moderator improved this impact by 0.077. The study recommended giving more attention to procedural justice and to enhance transparency and other corporate governance elements. The study recommended also fostering employees' job security through engaging in human resources retaining strategies.

Keywords: Organizational justice · Organizational trust · Job security · Jordanian Insurance Companies

1 Introduction

Organizational justice and trust are important concepts in business practice and human resource management in organizations. Likewise, organizational justice and trust reflect the positive side of the employees, and this is reflected in their performance and organizational affiliation with the organization in which they work to form a fundamental relationship [1, 2]. According to [3], organizational justice and organizational trust in organizations enhance the job performance of employees so that they reduce many negative effects. Although many studies have been conducted on the impact of organizational justice on trust [2–6]. There are few studies that dealt with the aspect of job security, in addition to the fact that the current study adopted job security as an intermediary factor,

the current study is interested in explaining the impact of organizational justice on trust to contribute to the literature of the field of study. And whether job security affects the relationship between organizational justice and organizational trust. In addition, the field of study research in Jordanian insurance companies, gives new contributions in the service sector and in a developing country such as Jordan in terms of organizational justice, organizational trust, and job security. Especially since the global economic situation imposed many challenges and increased competition, which forced insurance companies in Jordan to seek to adopt modern strategies in business to enhance productivity and support their position, especially since a country like Jordan has many insurance companies within a small population. This increases competition among them. In addition, the insurance sector in Jordan includes small, medium and large companies, and this may create a difference in the application of strategies, but in the same matter they agree that the employee is the focus of the attention of companies from large to small, especially in the insurance sector because they are companies that provide services and not goods [7]. Hence, organizational justice, organizational confidence and job security are important factors affecting employees [8, 9]. Accordingly, the importance of the study lies in strengthening insurance companies in Jordan through the important factors affecting the employees, which is reflected in their performance, and this is due to the company's productivity, which supports it in facing challenges in Jordan due to the presence of high competition and a decline in the economic situation as a whole, especially after the Corona pandemic.

2 Review of Literature

2.1 The Relationship of Organizational Justice and Organizational Trust

Based on business administration, organizational justice has been considered one of the important concepts in the field of organizations' business and organizational behavior [10, 11]. Accordingly, organizational justice is linked with fairness so that employees can see equality among themselves with reward and punishment, and employees always deliberately compare that among themselves [12]. Accordingly, the concept of organizational justice is divided into dimensions: first Distributive justice in the results within the organization [13]. Then procedural justice means justice in the procedures within the organization by managers in terms of reward or punishment for employees. Finally, interactional justice, crystallizes in justice by dealing with all employees, i.e. by personal treatment between managers, employees, employers, and employees [14]. In the same context the organizational justice and its dimensions, it enhances the human cadres in the organization and preserves the human capital, which is reflected in the satisfaction of the employees, as the employee in the event of touching injustice was not satisfied with the environment of the organization in which he works [15, 16]. Study, which examined the impact of organizational justice on employees, showed that organizational justice enhances the capabilities of employees through their feeling of satisfaction and reassurance from the work environment. According to [17] study, which aimed to examine the relationship between organizational justice and organizational trust, there is a positive relationship in addition to the presence of compatibility with the dimensions of justice represented in procedural justice, interactive justice and distributive justice. Likewise

organizational justice and organizational trust among employees in organizations play an important role and represent a supportive relationship in addition to the association of the dimensions of organizational justice in that, procedural justice and distributive justice [8]. According to the above discussion about the relationship of organizational justice and its dimensions and organizational trust, the following main and sub-hypothesis were assumed:

H1 Organizational justice (distributive, procedural and interactional) has a positive impact on organizational trust.

H1-1 Distributive justice has a positive impact on organizational trust

H1-2 Procedural Justice has a positive impact on organizational trust

H1-3 Interactional justice has a positive impact on organizational trust

2.2 The Relationship of Job Security with Organizational Justice and Organizational Trust

Job security is considered to have a fundamental impact on the performance of employees and their organizational behavior. This was demonstrated by comparing the work performance of employees appointed with a permanent contract, where their performance and behavior were better than employees appointed with temporary contracts [18]. According to study of [19], which examined the concept of job security, it appears that job requirements enhance job security, and this in turn is reflected in the employee's performance, as the higher job guarantees there are, the more job security is achieved.

Accordingly, study of [20] examined the relationship of organizational justice with job security. The results of the study revealed the existence of a consensual relationship between organizational justice and job security in terms of developing employees' behavior and performance, even if they suffer from job fatigue in their work environment. On the other hand with the relationship of organizational trust and job security Organizations that adopt organizational trust achieve high practical results. Therefore, job security and organizational trust are important matters for the organization, as there is a positive relationship between organizational trust and job security, The greater the organizational confidence and job security in the organization, the greater the organizational behavior of the employees and the psychological commitment, which is reflected in the performance of the employees and the performance of the organizations [9]. According to the above discussions about job security and its relationship with organizational justice and organizational trust, the following hypothesis has been proposed:

H2 Job security positively moderated the effect of organizational justice on organizational trust (Fig. 1).

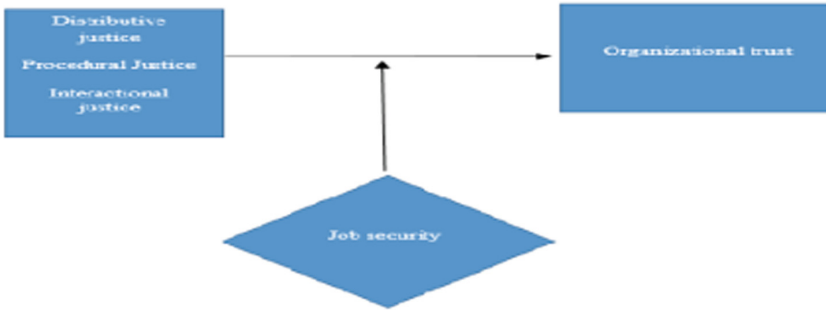


Fig. 1. The study framework

3 Research Methodology

3.1 The Study Population and Sample

The population of the study consisted of all the Jordanian Insurance companies, according to the Jordanian Securities Depository Center, (22) shareholdings Insurance companies are operating in Jordan, 19 companies agreed to participate in the survey. The sampling unit consisted of middle and first line management, in all the companies Branches, a random sample of 360 were selected [21–23]. The study relied on the quantitative analytical descriptive method, and to collect the needed data and information a questionnaire was developed based on 5-point Likert scale [24–27]. The first part of the questionnaire contained the information related the characteristics of the participants [28]. The second part was designed to measure organizational justice, which were obtained from [29, 30]. The third part of the questionnaire encompasses organizational trust questions, which were obtained from [31, 32]. The last part was developed to measure the moderator variable (job security), the researchers relied on [33]. A total of 360 questionnaires were distributed, 319 questionnaires were valid for statistical.

3.2 The Questionnaire Reliability

Cronbach's alpha was calculated to identify the internal consistency of the tool questions. [34–38], commented that if the results of this measurement were 0.70 or more the questions of the variables are internally consistent. The results of organizational justice = 0.811, Organizational trust = 0.84,3 and Job security = 0.798. Consequently the results revealed that the study tool is reliable.

First: The Respondents' Characteristics

Frequencies and percentages were used to get the results of the respondents' characteristics. When it comes to gender 38.7% of them are females, and 61.3% are males, this variations is due to the nature of managerial positions that needs long working hours and to transfer from place to place. These conditions are difficult for females particularly when they have family responsibilities. In terms of age, 33.1% of them were between 25–35 years old, 41.6 were between 35–45 years old, and 25.3% were older than 45 years

old. According to education: 15.9% of the respondents have diploma, 66.8% have B.A, and the 17.3% have Master degrees. All the participants have minimum 5 years practical experience in the insurance sector.

4 Descriptive Statistics Analysis

The researchers employed one sample t test with 3.5 as a compare value with 95% confidence interval [39, 40]. Table 1 shows that the total means of the three types of organizational justice were as follows (3.75, 3.67, and 4.05), the results revealed high level of application of the three types of justice, the interactional justice recorded the highest mean. The table also manifests the means of the dependent variable (organizational trust) = 3.84 and the moderator (job security) = 3.82, which proved a high level of application for these two variables in the study population according to the perception of the sample members. The table shows also that (t sig) values of all the variables = 0.000 which is less than p value 0.05. This result confirmed that there is no difference between the sample means of each variable and the population mean, and all the variable are applied in the Jordanian Insurance companies.

Table 1. Descriptive statistics and one sample t-test.

One sample t-test				
Confidence interval = 95% test value = 3.5				
Variables	Mean	Std. deviations	T	T sig
Organizational justice				
Distributive	3.7484	0.66499	6.672	0.000
Procedural	3.6701	0.69242	4.387	0.000
Interactional	4.0549	0.37320	26.555	0.000
Dep				
Organizational trust	3.8427	0.33057	18.518	0.000
Job security	3.8245	0.47968	12.081	0.000

N = 319 df = 318.

4.1 Hypotheses Testing

H1 Organizational justice (distributive, procedural and interactional) has a positive impact on organizational trust.

To test H1 multiple regression was calculated with p value = 0.05, the hypothesis will be accepted if t sig value was less than 0.05. Table 2 illustrated the results of the multiple regression as follows: The value of R = .548 revealed a moderate correlation between organizational justice and organizational trust, the value of R² (0.300) indicated

that 30% of the variation in the organizational trust is explained by the organizational justice, while 70% of the dependent variable variation is due to other factors. The ANOVA part manifests the value of F (45.074) and F sig which = (0.000) since the sig value is less than 0.05 means that at least one of the independent variables (the organizational justice dimensions) has a statistically significant impact on the dependent variable (organizational trust). The third part (the coefficient) shows based on the value of t sig that the distributive and the interactional justice both have a statistically significant impact on organizational trust, while the procedural justice has no statistically significant impact on organizational justice.

Table 2. Multiple regression results

Independent variables (organizational justice)	Dependent variables	Model summary		ANOVA		Coefficient		
		R	R square	F	Sig.	Beta	t	Sig.
Distributive	Organizational trust	.548 ^a	.300	45.074	.000 ^b	.182	2.447	.015
Procedural						.003	.034	.973
Interactional						.467	9.405	.000

H2 Job security positively moderated the effect of organizational justice on organizational trust.

To test the moderation effect the researchers relied on the hierarchal regression. which was employed through 3 steps In the first step the impact of organizational justice as one single variable on organizational l trust was calculated to confirm a statistically significant impact based on t sig = (0.000) In the second step job security impact on organizational trust was tested, with F = 122.266 at (0.000) sig level. And t value = 8.576 at 0.000 sig level. In the third step the interaction between organizational justice and job security impact on the organizational trust was tested, t value = 7.038 at 0.000 sig level. The values of R: the correlation were as follows: In the first model = 0.415 indicated a moderate relationship between the organizational justice and organizational trust with R2 = 0.172 In the second model R = 0.660 indicated a strong relationship between job security and organizational trust with R2 = 0.436 In the third model R = 0.716 indicated a strong relationship between the interaction of the independent and the moderator variables together and the dependent variable With R2 value = 0.513 (Table 3).

Table 3. The second hypothesis results (hierarchical regression results)

Model	R	R ²	R ² Change	F	Sig.	F Change	Beta	T	T sig
1	.415 ^a	.172	.172	66.007	.000 ^b	66.007	3.638	7.642	.000
2	.660 ^b	.436	.264	122.266	.000 ^c	147.930	2.841	8.576	.000
3	.716 ^c	.513	.077	110.545	.000 ^c	49.540	4.470	7.038	.000

5 Results

The results of the study indicated that, the largest percentage of insurance company employees were males, and the largest age group among employees is the age group by 35-45, and the largest percentage of employees in insurance companies hold a diploma, not a bachelor's degree or higher studies. While the results of the study indicates that the distributive and the interactional justice both have a statistically significant impact on organizational trust, while the procedural justice has no statistically significant impact on organizational justice. The values of Beta revealed that the interactional justice has the highest impact on enhancing organizational trust among insurance companies' employees, followed by the distributive justice. In addition to that the impact of the organizational justice on organizational trust improved with the existence of the job security.

6 Discussion

This section discusses and contrasts the analysis's results with those from earlier studies. As discussed in the literature Organizational justice enhances organizational trust in terms of employee job security [41]. As a result, companies tend to Organizational justice (distributive, procedural and interactional) in achieving organizational trust [8]. Based on business administration, organizational justice has been considered one of the important concepts in the field of organizations' business and organizational behavior [11]. Accordingly, trust is considered to have an active role in the relationship of employees with the organization [42]. Justice and job security increase the performance of employees and their organizational behavior, which confirms the existence of a relationship between organizational justice and job security [5]. The current study revealed that while distributive and interactional justice both have a statistically significant impact on organizational trust, this is consistent with [8]. While the procedural justice has no impact on organizational justice this is what you agree with [43]. In addition to that, the impact of organizational justice on organizational trust improved with the existence of job security. This was consistent with a study of that emphasized the role of modified job security on organizational trust and organizational justice [44]. In order to reach an in-depth understanding about the relationship of organizational justice to organizational trust, the study model was assumed, which showed that all dimensions of organizational justice play an important role on organizational trust, and that job security enhances this relationship and where the greater the job security, the stronger the relationship between them. This in turn affects the employees and their performance.

7 Conclusions and Recommendations

Organizational Justice can be described as the perceived state of equity and fairness that are felt by the staff of the organization. Related to the financial and non-financial compensations and benefits they got, and also to the equity and fairness of the regulations and policies that apply to them, and the level of respect, honesty and integrity of dealing with all the staff regardless the managerial level, by their management. The topic has an interest particularly in the new era, due to the crucial role it plays in enhancing employees' moral and positive attitudes towards the organization and its members. So that this study aimed to examine the impact of organizational justice in terms of (distributive, procedural and interactional) on organizational trust, taking job security in consideration as a moderator. The findings of the study underlined the statistically significant impact of two dimensions of organizational justice on organizational trust, (the distributive and the interactional) whilst the procedural justice has no statistically significant impact on organizational justice. When it comes to the moderator role, the results revealed that organizational security improved the impact of organizational justice on organizational trust by .077. Based on the findings it is important to apply all the dimensions of organizational justice, particularly the procedural, accompanied by transparency and other corporate governance elements. The study also recommended to give more attention to the crucial role of job security in promoting organizational trust in all its dimensions for future research it is recommended to study the impact of organizational justice on other factors than organizational trust, and in other sectors than the insurance companies. Accordingly, insurance companies in Jordan must rely on business strategies related to organizational justice and organizational confidence, taking into account job security, in order to achieve a fair and positive work environment, which is reflected on the performance of employees and the performance of the company as a whole, especially insurance companies are service companies that rely mainly on the employee, and for the purposes of future studies, this study can be applied to companies with a different sector, such as telecommunications, because of its important economic role in Jordan.

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Owner-Managers' Perceptions of Ethical Culture in Malaysian Small Medium Enterprises (SMEs)

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Abstract. The study aims to identify the elements of ethical culture being implemented in small and medium enterprises (SMEs) in Malaysia. The method used for this study was a phenomenological approach with a purposive sampling method. The research was conducted through interviews with managers from 11 SMEs in Malaysia, which included micro, small and medium enterprises. Atlas.ti version 9.1.3 was used to identify and explore themes and codes among the interview data. Primary elements found were the aspects of formal elements, informal systems and leadership as found in the past literature. The critical aspects of communication, training and management were also discovered in this study. However, one element found in Malaysian SMEs not otherwise found in the literature is religiosity. This study bridges significant obstacles to knowledge generation of the essential issues of ethical culture in SMEs. All the elements of ethical culture discovered to be implemented in the small medium enterprises (SMEs) during the interview are presented in this paper.

Keywords: Ethical culture · SMEs · Religiosity · Manager

1 Introduction

Nowadays, ethical standards need to be emphasised in company culture. The ethics issue remains limited in business literature and is given less attention by SMEs researchers [22]. There were more studies on ethics in large organisations rather than in SMEs. Small-medium enterprises are becoming major business vital actors in the economies of countries globally [30] and function as economic drivers and engines for a country's economic growth and development [14]. SMEs contribute tremendously to GDP [32]. SMEs are regarded a backbone of the economy in most nations [23, 27]. SMEs have a considerable presence in the economies of all countries globally, especially in fast-changing and competitive global markets [28]. In Malaysia, SMEs have produced many work opportunities, covering many families' daily income, education, house rent, utilities, and other family expenses [18]. About 97.2% of business entities in Malaysia are SMEs, including 1.6% medium, 20% small, and 78.4% micro enterprises [18].

Due to local and global corporate crises, there is a need for ethical business practises [19]. Since most SMEs lack an ethical culture, fraud is a possibility [36]. Individuals and organisations have revealed numerous reports of fraud, corruption, kickback, and dishonesty [10]. In Malaysia, fraud rose to 43% in 2020 and ranks highest among Asian countries [36]. The frequency of fraud cases has harmed firm reputations, indicating that owners do not even value an ethical culture.

According to ACFE (2018) [4], small firms lack resources to grow and thrive. In addition, a company's sustainability may be affected by limited access to funding [20], which depends on how well its management runs the company. Many realize ethical wrongdoing may be costly for small firms and others [1]. In competitive contexts, the different backgrounds of employees provide ethical issues for individuals and management [1]. Implementing ethical procedures has put pressure on business owners [25]. Business ethics in large organisations are limited in small organisations due to poor global competitiveness and significant failure likelihood [15]. Fernandez and Camacho (2016) [22] report that SMEs' ethical issues have received less attention from researchers. SME sustainability is a challenge. They struggle with the global marketplace's impact on SMEs' ethical behaviour, which affects stakeholders [15]. SME bargaining power is weak. Customers may employ unethical practises like bribes and SME contracts. SMEs are susceptible when they struggle with technological improvements, changing market trends, and business sustainability [2].

The objectives of this study are to explore the ethical culture elements being implemented in SMEs. Therefore, the research questions are focusing on *what are the elements of ethical culture being implemented in SMEs?* Therefore, this paper has research and practical value. Understanding ethical culture in SMEs will advance the field. This research creates a basis for future research on SME ethical culture. This study should notify policymakers and practitioners about implementing best practises for SMEs in which it in lines with the new Malaysian government's goal to promote ethical practises and combat ethical misconduct.

2 Literature Review

2.1 Ethical Culture

Ethics is a set of values or guiding principles for proper behaviour [29, 33]. Ethical rules of conduct provide guidelines that protect a community and its members [6, 34], as well as prescriptive rules and virtues that help individuals determine how things should be done. Ethical culture is as social and behavioural environment where individuals must differentiate right and wrong and act beyond the minimum implementation of ethical decisions and behaviours [8]. It is also a subset of organisational culture that represents various dimensions of formal and informal systems in the organisation. [38] extended this to include influential ethical culture, where several pillars are applied in the organisation. The first pillar is concerned with core values. The second pillar is the ethics program, and the third pillar is ethical leadership. However, in the literature of [22] that as overall ethical culture is influenced by the three elements which are formal systems, informal systems [21] and leadership [35] and all elements can be differentiated by goal (communication, training, and management) [22].

Formal Elements. Formal ethic systems are tangible and provided in paper or electronic. It is an organization's procedures and policies that direct all parties to achieve its goal. A training course that generates a record is formal [26]. Formal ethical culture includes mission statements, codes of conduct, orientation rituals, and rules and regulations. [22] list formal elements such as codes, review, reports, transparency of information, specific ethics content, welcome manual, and adherence to bodies or standards. [22] cite only formal communication elements. Employees and potential candidates in the hiring process can view company information online. They can view company performance and results. It can also help employees achieve the organization's goal. [31] say formal communication can be vertical, horizontal, or diagonal. Formality depends on the company's strategic goals. Ethical values can also be found in the company's vision and mission statement, where the mission statement provides information on ethics, orientation, and strategy [11, 16]. Promoting the company's ethical values would give it a competitive advantage [9].

Informal Elements. Informal ethical culture is the second element in ethical culture which includes organisational norms, values, and behaviour [11]. In contrast to formal systems, informal systems are more prevalent when it comes to resolving unethical issues within the organisation [21]. An informal system focuses more on implicit learning from experience that is acquired without awareness, and the culture is becoming normalised inside the organisation. It can be accepted or not accepted in achieving the organisation's goal. An informal system and a formal system are interconnected, and if the informal system and the formal rule are alligned, then the organisational objective can be achieved. According to [31], informal communication can be defined as unofficial and spontaneous messages. It is generally with the exact directions with the formal communication.

Leadership. Leadership is a major factor in culture, including an organization's ethical culture [35]. Organisational leadership describes the shaping of the organisational context, provision of strategic direction, and influencing the firm's philosophy by top management [3]. [5] found that business directors must lead ethically to have ethical executives, employees, and agents. The organization must also be accountable to its stakeholders and ethical effect can be reached by assessing how they integrate ethics [5]. While, [17] found family employees make family business more personal and its mentoring characterised by teamwork, trust, and loyalty that displayed family business value ethics.

3 Methodology

This study employs a phenomenological study approach as It aims to comprehend a person's experience and capture the essence of a lived phenomenon [13]. Face to face interviews were performed to obtain information regarding the objective of the study. An interview script was developed, and a few processes were taken to ensure the interview questions were structured well. Three bilingual organisational researchers and accounting professionals validated the scripts to see whether any terms were missing, unclear, or hard to understand [7]. Thus, the validated scripts were used for a pilot test in the SMEs from two SME players. The scripts were finalised at the end of the interview session

with the understanding and accuracy of the SME player's perspectives. The questions for the interview consist of background information and elements of the ethical culture practised in SMEs.

The target participant sample size for this study was ten respondents. However, the researchers acquired eleven participants. Before engaging in the interviews, an ethical clearance letter was approved by university ethics committee. This study's quality was based on its credibility, reliability, and ethical standards. The interviewee's knowledge of the ethical issue is used to select candidates. After the interviews are finished, the transcripts are forwarded to the interviewees so they can acknowledge, comment, and verify the information. For registration and analysis, a digital recorder was used. Respondents' answers were noted in case the recording equipment failed and the interview couldn't be transcribed verbatim [12]. After the interviews, the tape was transcribed to find any questionable words or expressions. Data was analysed with ATLAS.ti 9.1.3. It helped code, categorise, and cross-reference the data to find the themes.

4 Key Findings and Discussion

SMEs managers have different views on ethical culture. Some assert ethical culture is part of the company's business practises. Ethical culture encompasses all ethical in the organisation. They also believed it was due to organization's working culture, policies, and communication.

After interviewing SMEs, it was found that formal systems, informal systems, and leadership were implemented, which supported [22] study with one added ethical culture element, religiosity. In Malaysia's SMEs, not all proposed goals (communication, training, and management) were implemented. The formal systems mainly involved communication and management. Informal systems are related to all three goals, but mainly communication and leadership, according to management. Religion is practised by all interviewed SMEs and can be used by Malaysian SMEs. Hence, Coronavirus-2019 attacked Malaysia in March 2020, disrupting business. Therefore, the manager of SMEs adheres to the law (bodies or standards), such as providing employee welfare and continuously checking on their health before working to ensure the virus will not attack and spread to other employees.

The interview revealed guidelines documentation elements. The manager provided the employee procedures and SOP. Internal communication, formal meetings, job description documentation for each employee, and a performance checklist or progress report were also followed. SMEs with vision and mission had formal communication elements. Some prepared a handbook for employees that acted as a code of ethics in which the management shared their beliefs and ethical values. Besides that, communication-related informal elements were most prevalent. Telephone conversations are daily. SMEs implemented employee-manager conversations frequently. Clear communication and using their own language and spontaneity were important as a two-way relationship to maintain the relationship and ensure the goals can be accomplished together.

SMEs implement communication information like informal but regular meetings. It's often held weekly, and it's a useful way for management to discuss issues with employees, including ethical ones. In informal meetings, minutes weren't always taken. SMEs also use informal performance rules.

According to previous studies, the leader played a key role in all three aspects (management, communication, and training). Malaysian SMEs managers or owners provide several elements. One of the key aspects was setting an example related to work or written or unwritten rules.

Other leadership elements found in this study are avoiding 'moral silence': establishing clear expectations and promoting creativity, ensuring the selection process following ethical values, promoting responsibility at the individual level, addressing ethics issues, rewards behaviour, performance reward, and being realistic about expectation and interest of employees.

Coaching has also been identified as a significant new aspect. Coaching is essentially guidance for someone to achieve an organisation-established goal. The coach acts as a facilitator for the employees. For example, they ask employees how to solve problems. The employees will be led to the desired solution.

Religiosity are new elements of ethical culture that are being implemented. Religiosity are key to SME growth. It drives decision-making [24]. This suggests that they prioritise religion above all else. Religiosity make employees honest and trustworthy. Religion also fostered closer relationships between employees within the organisation, provided serenity, and promoted a healthy work-life balance.

SME owner-managers believed all formal, informal, leadership, and religiosity elements in their organisation were linked. Regular informal meetings helped SMEs grow. It cannot be created if one is missing.

5 Conclusion and Limitation

Ethical culture issues in SMEs in Malaysia are required, especially due to a lack of research. SMEs managers from different industries have different views on ethical culture in their companies. In three months, 11 Malaysian SMEs participated in a semi-structured exploratory study. This study found SMEs' awareness of ethical standards and issues in their organisation. In addition, the study found that formal, informal, and leadership elements were implemented in SME organisations. Despite this, only formal training elements were not implemented in Malaysian SMEs, based on a review of the key aspects. Principally, the key aspects, such as formal communication and management elements, were implemented, followed by informal communication, leadership-related training, and management elements. In their organisation, a code of ethics, mission, and vision exist. Additionally, the SMEs adhere to the authority's regulations, bodies, and standards. Guidelines, job descriptions, and internal communication were documented. A formal meeting was also held, and its minutes were documented. The employee performance checklist and progress report were also used.

All key aspects of informal systems were then implemented (i.e., communication, management, and training). In informal communication settings, employees engage in conversation and use their own language. The organisation normalised day-to-day learning, informal meetings, and informal performance rules. In leadership elements, managers lead employees towards their organization's goal by example. They avoided 'moral silence' between employees, set clear expectations, and promoted creativity. The selection process was also ethical, promoting individual responsibility, addressing ethical issues, rewarding ethical behaviour, and setting realistic goals. Coaching is a new

leadership element. In Malaysia, a new ethical element was found in SMEs: religiosity. However, the formal element of training has not yet been implemented in Malaysian SME. Overall, the awareness of ethical culture in Malaysia, especially for SMEs, is still lacking.

The study presented a few limitations related to the size of companies. The views on ethical culture in SMEs were still lack. As Malaysian has more than 80 percent of the SMEs are micro-enterprises, the research should be in-depth to find out and give awareness towards the SMEs because during the approach for interviewed, some were afraid maybe due to the transparency of the information that they had. In terms of the area of the study, it is suggested to have a study that focuses on certain districts or states in the future. This study might be concerned with specific industries or specific sectors to view more on the issues in specific areas.

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

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Service Quality's Effect on Customer Satisfaction (A Comparison Assessment of the Public and Private Banking Sectors)

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Abstract. The objective of this research has to compare the effect of service quality on customer loyalty in Komolcha city between public and private banks. As a result, the study's findings are important in that they offer solutions for bank customer satisfaction issues and give them an understanding of where they are now in terms of service quality and what they can do in the future to please customers and compete effectively with the sector's current fast growth. The analytical analysis methodology was used to achieve the study's goals by combining quantitative and qualitative data descriptions. A total of 385 bank customers were interviewed and a questionnaire was used to gather data. Convenient screening methods were used to collect the sample. Statistical methods such as mean, standard deviation, correlation, independent sample t-test, and multiple regression analysis were used to interpret the collected results.

The findings of this study show that all five service quality dimensions (tangibility, assurance, openness, empathy, and reliability) have a strong and important association with customer satisfaction and that customers of the public bank in Komolcha town are dissatisfied with all five dimensions of service quality. Customers of private banks, on the other hand, were pleased with the three service level dimensions (Tangibility, responsiveness and assurance.) Customers in private banks, on the other hand, we're disappointed with the efficiency and empathy aspects of service quality. Similarly, the five service quality dimensions (tangibility, empathy, assurance, and reliability) were found to explain 68.9% of the differences in customer satisfaction in public and private banks in Komolcha town. The researcher contains suggestions to the bank's management and makes suggestions for other studies conducted on the study's results.

Keywords: Customer loyalty · Customer satisfaction · Service quality · Profitability and sustainability

1 Introduction

Banks would also play a critical role in stock market activities as well as a vital role in maintaining a country's economic growth. To do these, banks have to provide quality service to customers and enhance customer loyalty and customer satisfaction. According to Hansemark and Albinson (2004), "Satisfaction is a customer's overall feeling toward a service provider, or an emotional response to the gap between what consumers want and what they get when it comes to the satisfaction of those wishes, goals, or desires. Customer loyalty, on the other hand, refers to a strongly felt commitment to repurchase a favourite good or service in the future, considering the possibility of switching behaviour due to situational influences and marketing efforts. (Oliver, 1997). Better profitability and a larger market share are critical factors in improving bank efficiency and deciding their future. (Hung et al. 2003). Thus, service quality becomes a decisive tool for private and public Banks to struggle to make themselves unique and different from other competitors (Ladhari 2008). This is why scholars most of the time focus on defining service quality and identifying determinant factors in service quality that contribute to the success of the organization (Nagi 2009). Thus to say that Banks are providing high service quality, there should be high-quality service in banks which in turn enhances customers' satisfaction and motivate them to loyal to banks (Duff et al. 2008).

Service quality can be achieved when customers' expectation about the service they get from banks and what banks provide is matched (Akroush 2008). Besides, customer loyalty is the easiest way to assess service efficiency. This is because service efficiency improves as performance beats expectations and decreases when performance falls short of expectations. (Athanassopoulos et al. 2001). Banks in the service sector consider service efficiency to be a strategic aspect of their business strategy in these calls (Spathis et al. 2004). Organizations can achieve a higher degree of service efficiency, and higher levels of customer loyalty, and retain a constant competitive edge by focusing on service quality. (Meuter et al. 2000). Banks have to also focus on providing excellent and world-class standard services to survive in the banking industry. Guo et al. (2008). This brought a remarkable change in how banks performed their activities over the past decades. Customers are also looking for quality service from banks as they have various choices available than before. Thus, banks have to recognize this fact in their customer expectation (Newman et al. 1996). These calls for banks in the market to put their maximum effort into service quality to differentiate themselves from their competitors and enhance their image, dependability, responsiveness, reputation, and communication, all of which contribute to customer loyalty and retention (Newman, 2000.). Much research on service quality and consumer loyalty has been conducted, with the conclusion that "service quality has a favourable impact on customer satisfaction." These two variables should work hand in hand to ensure the success and survival of the private sector banks. The study accomplished that quality service is an important factor to satisfied customer satisfaction. So, Banks should focus on service quality to satisfy their customers in every

dimension of service quality” (Rashed et al. 2014). Besides, According to Mohammad and Alhamadani (2011), service efficiency is a significant determinant of customer satisfaction. Parasuraman et al. (1985) confirmed that “service quality is a significant predictor of customer satisfaction.” Heskett et al. (1997) also concluded that “Service quality and customer satisfaction have been identified as key elements of the service-profit chain”. The successfulness of an organization is, therefore, determined partly by customer satisfaction. Accordingly, Newman and Cowling (1996) stated that “excellent service quality is vital to business profitability and survival.” Hence from these research findings, we can understand that if service quality is ignored in the organization, it will have negative effects on the organization’s profitability and sustainability. With the provision of licensing investments to private bank services by the government of Ethiopia, there is rapid growth or expansion of the banking sector. It provides services in different parts of the country and plays a vital role in economic development. It also makes intermediary financial services for society at global levels. The quality of services provided by the public bank and private banking sectors still needs improvement to attract and satisfy customers (National bank of Ethiopia 2009/10) While studies on service quality and its effect on customer satisfaction have been performed in various banks independently, they cannot compare service quality and its impact on customer satisfaction in the public and private banking industry. Besides, no research is carried out on service quality and its impact on customer satisfaction in private and public banks in Kombolcha town. As a result, this research aims to compare the effect of service quality on customer loyalty in public and private banks using Service quality dimensions. In many service sectors, customers focused on the best quality services in all aspects due to the presence of different alternative services. According to Peter F. Drucker, “Quality in a service or product is not what you sate into it. It is what the client or customer gets out of it”. The lack of in-depth research into consumer needs is the most critical part of the relationship between service providers and consumers. To thrive in their market, banks must prepare effectively to draw new customers and satisfy them. After that, banks must coordinate their operations and actions to satisfy and retain customers, recognising the role of customers in driving results. (Johnson et al. 2000). Quality can be a critical factor in the production of value and affect customer loyalty with every bank. As a result, the banking sector must be geographically situated to offer high-quality services to consumers. Banking firms must examine the level of awareness and preferences of consumers when it comes to service quality to deliver better service. Customer satisfaction depends on the individuals feeling about whether the services provided by an organization to an individual satisfied him/her or not concerning his or her expectations (Oliver 1980). Customer loyalty is often prioritised by service suppliers and it is seen as a requirement for customer retention. Customer loyalty leads to frequent visits to retailers, repeat product orders, and word-of-mouth exposure to friends as a beneficial result of marketing practices. (Anderson et al. 1994) Although low customer satisfaction has been linked to a tendency to complain (Zeithaml et al. 1996). A happy client is more inclined to remain loyal and patronise the company in the future (Kotler et al. 2006). Customer satisfaction can be divided into two categories: transactional satisfaction and cumulative satisfaction. A customer’s assessment of her or his experience and responses to a particular business interaction is known as transaction-specific satisfaction. Cumulative satisfaction refers to

a customer's cumulative assessment of their patronage service from the beginning to the present. (Boulding et al. 1993). Banks play an important economic role as intermediaries in mobilising public savings and channelling the influx of funds for beneficial purposes, ensuring that the country's economic growth continues (Uppal 2010). Recognizing the importance of banks in economic growth, the Ethiopian government/Reserve Bank has taken many significant steps since 1991 to align the banking system with the country's goals. Currently, there is rapid growth and expansion in the banking sector. The banking system is confronted with strong competition and technological advancements; bank systems have become more simple and more convenient (National Bank of Ethiopia 2010). For example, several studies have been conducted to determine the impact of service quality on customer loyalty. Tizazu (2012) researched the effects of service quality on customer satisfaction in private banks and the result indicates that "there is a positive effect of the four service quality dimensions on customer satisfaction." Besides, Yonatan (2010) concluded that "the banks need to become more responsive and assuring to their customers as well as increase their accessibility." Belyu, (2012) also confirmed that "the overall service quality perceived by consumers was not satisfactory meaning expectations exceeded perceptions and all the dimensions showed higher expectations than perceptions of services." Even though studies on service quality and its effect on customer satisfaction have been performed in various banks across the country, they are limited in their ability to compare service quality and its impact on customer satisfaction in the public and private banking sectors. Moreover, in Kombolcha town. In addition to this, the researcher carried out the observational survey and referred to suggestion boxes at private and public banks in the area, some customers raise complaints about the service quality of the private and public banks. This will be used as a springboard to study the issue in detail. So this study attempted to assess the impact of service quality on customer satisfaction in comparison to the public and private banks by using Service quality dimensions.

2 Research Methodology

The approach of the research explains Why has a research study been conducted, how has the research problem been identified, how the data been obtained, what data have been collected and what specific techniques have been used, why has a particular method of data analysis been used, and several other questions about a research problem are generally asked. (Kothri, 1990). So considering this the researcher has presented under this; sample size, research design and sampling techniques, data sources and data collecting tools, data analysis and interpretation.

Research Design: Accordingly, this research aims to assess the impact of service quality and customer satisfaction in comparison of three private banks namely Dashne Bank, Wogagen Bank, and Abay Bank and one public bank namely the commercial bank of Ethiopia Kombolcha Town. A descriptive and explanatory analysis approach was used to accomplish the study's goals.

Data Source: The effect of service quality and customer loyalty in comparison to three private banks was assessed using primary and secondary data sources in this report.

Namely Dashne Bank, Wogagen Bank, Abay Bank and one public bank namely Commercial Bank of Ethiopia at Kombolcha town. The primary data has been obtained from employees, managers and customers of private and public Banks in the study area. Moreover, the secondary data has been obtained from manuals, and reports, which are prepared by these banks.

Data Collection Tools: The data collection tools conducted in this study were a questionnaire and an interview. Therefore, structured interview questions were prepared for the branch managers (4) and one employee in the position of customer service officer (4) of the private and public banks to explore the impacts of service quality that could not be raised in the questionnaire to strengthen the respondent's response. Besides this; questionnaires were prepared; for respondents selected from customers of private and public banks. Thus, the questionnaires consist of closed-ended question items which have both Service Quality Questionnaire (SQQ) and a Customer Satisfaction Questionnaire (CSQ).

Sampling Method and Sample size: The population of this study was all the customers who received services in saving and current accounts from the three private banks namely Dashne Bank, Wogagen Bank, and Abay Bank and one public bank namely Commercial Bank of Ethiopia at Kombolcha Town. The convenience sampling approach was used in this analysis to select a sample from the available population based on the researcher's interest or by assessing who can supply the necessary details and who is more willing to participate in the research (Hair et al. 2003).

Therefore, the total population of the bank's customers were 60,731(2014 banks data). This included all the selected banking sectors of current and saving accounts, out of this the sample has determined by using the following statistical formula (Cochran, 1977). According to the target population mentioned above, the population is infinite. Because Cochran defines above 50,000 the population is infinite if it is below this population it is finite. So the following statistical formula should be used to determine the sample.

$$n1 = \frac{z^2 * \{p * (1 - p)\}}{c^2}$$

where, n1 = population size or sample size

Z^2 = confidence level/95% valued by 1.96

P = population standard deviation/50%, C^2 = margin of error/5%

$$\begin{aligned} &= \frac{1.96 * 1.96 * \{0.5 * (1 - 0.5)\}}{0.05 * 0.05} \\ &= \frac{3.8416 * 0.25}{0.0025} \\ &= \frac{0.9604}{0.0025} = 384.16 \\ &= \underline{385} \end{aligned}$$

The total sample size has taken 385. But the population in each bank is different, so calculating the samples of each bank requires dividing based on strata proportionally by

using the following formula.

$$n = \frac{n1 * N1}{N}$$

where n = the total number of samples

N = total number of population

N1 = total number of population in each bank

n1 = number of samples in each bank (Table 1)

Table 1. Number of population and samples taken from each bank

Banks	Population/number of customers/N1	Sample size	Percent	Remark
Commercial bank of Ethiopia	40,000	254	66%	
Dashen bank 14,781+ Wogagen bank 3250+ Abay Bank 2700	20,731	131	34%	93 Dashne bank, 20 Wogagen bank and 18 Abay bank
Total	60,731	385	100%	

Source: Questionnaire developed for this research

Data Analysis: The data was analysed and presented using the Statistical Package for Social Science (SPSS) programme version 20.0. Descriptive analysis, correlation, single sample t-test, and multiple regression analysis were used as statistical methods in this research.

Descriptive Analysis: Tables, frequency distributions, and percentages were used to display the descriptive statistical findings, which included a summary of the statistics. Summary statistics, which include the mean and standard deviation values for each variable and attribute in this study, were also used to collect data.

Inferential Analysis: Karl Pearson Coefficient Correlation analysis.

When the relationships between the variables are linear and the interaction between the two variables is constant, the Coefficient Correlation is a commonly used mathematical tool for producing an index of the relationships between the variables (Cohen 1988). Determine if the service quality dimensions have a statistically meaningful relationship. (Tangibility, responsiveness, reliability, assurance and empathy) with customer satisfaction the Karl Pearson Coefficient Correlation was used).

The Coefficient Correlation will range from -1 to $+1$, according to Cohen (1988). A perfect negative correlation is represented by a value of -1 , whereas a perfect positive correlation is represented by a value of $+1$. A correlation value of 0 indicates that there is no interaction. The results of the Coefficient Correlation may be interpreted as follows.

Correlation coefficient Interpretation

$r = .10$ to $.29$ or $r = -.10$ to $-.29$ small

$r = .30$ to $.49$ or $r = -.30$ to $-.49$ medium

$r = .50$ to 1.0 or $r = -.50$ to -1.0 large

T-Test Analysis: A T-test is used to compare the values on some continuous variable for two groups, or on two occasions (Cohen 1988). So independent-sample t-test was used for this research to determine the customer satisfaction level difference between public and private banks in Kombolcha town.

Multiple Regression Analysis: The effect of service quality dimensions (tangibility, efficiency, responsiveness, assurance, and empathy) on customer satisfaction was investigated using multiple regression analysis, and a regression model was constructed to validate the theories and assess the impacts of service quality on customer satisfaction. This model is incorporated to predict the value of a certain variable based on the other variables that are determinants of service quality dimensions (independent variables) to predict customer satisfaction comparatively private with public bank sectors (dependent).

Regression Functions: The dependent variable (customer satisfaction) and independent variables are the two types of variables in this study's equation of regressions (tangibility, reliability, responsiveness, assurance and empathy). The main goal of using regression equations in this research is to improve the study's ability to describe, interpret, and forecast the variables.

Regression of customer satisfaction on selected variables.

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5$$

where:

Y is the response or dependent variable- Customer satisfaction.

X1 = tangibility, X2 = reliability, X3 = responsiveness, X4 = assurance, X5 = empathy are the explanatory variables.

β_0 is the intercept term, which is a constant that equals the mean if all slope coefficients are zero.

The coefficients associated with each independent variable are β_1 , β_2 , β_3 , β_4 and β_5 , and they calculate the difference in the mean value of Y per unit change in their respective independent variables. As a result, the following relationships were explained using this mathematical methodology. Using multiple regressions, regress customer loyalty (as a dependent variable) on a chosen linear combination of independent variables.

Reliability and Validity of Data: Reliability is mostly concerned with matters of measurement accuracy (Bryman and Bel 2003).

According to Hair et al. (2006), if α is greater than 0.7, it indicates high reliability, while if it is less than 0.3, it indicates poor reliability. The questionnaire was circulated to 21 customers of public and private banks in Kombolcha town to ensure the accuracy and

reliability of the instrument, and Cronbach's alpha was found to be 0.939 and 0.943 for the service quality questionnaire, respectively. And a consumer loyalty questionnaire; the latter is true if the score is greater than 0.7. The degree to which a test tests what it claims to assess is known as validity (Creswell 2009:190–92). Validity is characterised as the accuracy and usefulness of inferences drawn from research findings. It refers to the degree to which data analysis findings accurately represent the phenomenon under investigation. He claims that the capacity and desire of respondents to supply the required information is critical to the authenticity of the questionnaire results.

3 Result and Conclusion

A comparative analysis of public and private banks in Kombolcha town was performed to investigate the impact of service quality on customer satisfaction. According to the study's conclusions, consumers of public banks were dissatisfied with all five dimensions of service efficiency (assurance, tangibility and responsiveness). Customers of private banks, on the other hand, were unhappy with the service level of Reliability attributes. Like Employees' politeness in the provision of services to customers consistently, effective handling of employees' complaints of customers and employees' dependability in handling service problems. In addition to this customer were dissatisfied with the Empathy attributes of employees' treatment and respect of customers, friendly service provision of employees to the customers, service provision of employees to the customer within a short waiting time, serious attention of employees to the customer and convenient location of the banks to the customers. Further on this, the findings of the research also indicate that customers of private banks were satisfied and had better service quality than public banks in Kombolcha town. The unbiased sample t-test ensures this. The t-test for equality of means sig. (2 –tailed) the result showed 0.00, which is less than 0.05, indicating that there were substantial gaps in consumer loyalty between public and private banks. According to the study's correlation findings, all five service efficiency measurements are positively and substantially linked to customer loyalty.

Furthermore, the results of the study show that reliability has the strongest link to customer loyalty, accompanied by assurance, openness, empathy, and tangibility. On the other hand, the study's findings indicate that the five service efficiency metrics can explain 68.9% of the variance in customer satisfaction, while other unexplored factors can account for 31.1 per cent of the variation in customer satisfaction compared to other service quality dimensions, the results of this study revealed that assurance is the most critical service quality parameter that has a positive and meaningful impact on customer satisfaction.

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Optimization in the Flow of Scientific Newspapers

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Abstract. The evolutions that occurred in the past decades have provoked variations in the market as well as academic and research. Given this scenario, the research explored in this article was aimed to analyze the contribution of the management of PMBOK methods for the optimization of Scientific Editorial Flow. The methodology used presented a quantitative approach, of descriptive character based on a survey, made available on social networks and Facebook groups, through the google forms platform. The sample is given by Snowball, this type of sampling enables the researcher to study specific groups and is difficult to reach. The analysis was by descriptive statistics, using the Likert scale, as well as the weighted average and fashion responses. It was identified that the Critical Success Factors of a Project that can contribute to the optimization of the editorial flow of a Scientific Periodical are efficient communication, empowerment, change management, client involvement, supplier involvement and conflict management.

Keywords: Management · News-papers · Projects

1 Introduction

The economic and scientific changes resulting from technological advances are changing the form of management, seeking to obtain better results, because of the challenges in adjusting procedures to the new scenarios. New computerized tools have been developed, significantly altering traditional ways of acting, even in well-established activities, such as scientific research.

About scientific journals, an important part of scientific communication, it is worth noting drastic changes with the emergence of the electronic journal and the ease of

communication between the editorial team and authors. In the same way as the open access movement (Open Access) has changed the issues related to the dissemination of scientific information, as discussed initially by Harnad et al. (2004) and Antelman (2004) and later by Piwowar et al. (2018).

Thus, with the evolution of the web and new technologies that provide the development of other forms of communication, journals need to innovate and improve the means of publication and dissemination of scientific research, so that they ensure the sharing of knowledge and, jointly, comply with the essential parameters of quality, periodicity and visibility, thus providing its recognition before the academic community. So much so that Bogers et al. (2018) suggest the connection between forms of open dissemination of information and scientific data to issues related to the so-called open innovation, which is related to the impacts of data flows and new combinations of knowledge and physical and digital resources.

Through technological advances and the constant ruptures of the status quo, unpredictability has become a more accentuated variable in contemporary society, so knowledge management becomes one of the most relevant actions that tend to reduce inconsistencies and constitute the contribution. to the decision-making process (Weersma et al. 2018).

In this context, it is observed that Project Management (GP) based on the Project Management Body of Knowledge (PMBOK) model, enables methods and techniques that allow a new standardized methodology, which points out specific areas of knowledge, procedures and tools for making the processes feasible, aiming to meet basic criteria such as scope, time, cost, quality and public engagement. Also, it has strategic actions to eliminate, mitigate or scale the risks and uncertainties of a project.

Named “The Project Management Knowledge Guide”, the PMBOK is recognized and used in more than 185 countries and covers the best practices in project management, creating different concepts, standardizing the actions to be used throughout the project and in its life cycle (Guerra et al. 2016). However, the concept of projects has evolved and the development and acceptance of its methods and approaches to carry out its planning and management have enabled its applicability in several areas, realities and organizational cultures. The search for methods and tools capable of leading the organization to succeed in the project, as well as in a scientific journal, has motivated many organizations to seek, in PMBOK, the best management practices and better planning and management of the projects (Lacerda et al. 2015).

Thus, this study aims to answer the following guiding question: What is the contribution of Project Management based on PMBOK to the optimization of the scientific editorial flow? In this sense, it is taken as a basic assumption that the criteria of a scientific journal can be related to the areas of GP and its basic criteria, under the direction of PMBOK.

Thus, a study is justified by the relevance that the research will bring to journals in the speed of their publications, by identifying the tools and methods of Project Management by PMBOK, to obtain greater efficiency in publications. And for the professional experience in the researched environment, thus identifying the need for a new methodology that avoids slowness in publishing. This work, too, can contribute as a model to professionals in the area of Administration, Accounting and Project Management, as well as assisting the members of the editorial team of a scientific journal from other areas of knowledge.

The relevance of the research stems from the positioning of scientific production in Brazil, which still requires better international competitive standards, since the country is in 12th place in the world ranking of scientific production, totalling 53 thousand articles in 2016. Significant growth of 89% in the number of articles published, however, the disparity vis-à-vis emerging economies is disproportionate, such as China, which showed an overwhelming growth in the last ten years, obtaining 426 thousand publications in the same year, leading the world competition (Jornal Da Ciência 2018).

This article has, in addition to this introduction, the theoretical framework that supports the research, and the methodology that proposes the best path. And later, the analysis of the results makes it possible to discuss the data found with the literature covered and, finally, the conclusion and references.

2 Periodic Characterization and Criteria

In the second half of the twentieth century, innovations in the areas of information and communication technology began an accelerated development, which modified the way of doing scientific production in several aspects, with electronic journals appearing and superimposing themselves on printed ones, through their characteristics that provide greater diffusion, cost reduction and speed in their editions (Pereira et al. 2017). According to ANPAD (2010), from the point of view of authors and their institutions, the academic journal initially has as its main function the dissemination of research results in the most comprehensive way possible.

However, there is a need to share the knowledge generated from scientific productions, so for this to be possible, in the mid-2000s in Latin America and especially in Brazil, a new international panorama called open access took place. whose objective is to make scientific production available online and at no cost to readers, whether printed or electronic (Fapesp 2017).

In this perspective, so that scientific production does not assume an amateur character, it is necessary to establish criteria and guidelines that standardize the structuring of research and provide its validation. According to Barata (2016) aiming to meet this purpose, in 2007, the CAPES technical-scientific Committee (CTC) approved a new classification containing new extracts: A1, A2, B1, B2, B3, B4, B5 and C (weight zero), in which the largest extracts are A1, A2, or B1, which evaluate scientific journals for excellence (extracts A) and quality (B1). According to Weersma et al. (2018), the issue of legitimation of content, in scientific journals, occurs through peer review, ensuring quality parameters. "Because peer review is the central element of contemporary scientific journals" (Vasconcellos, p. 13).

Among the attributes of a journal, according to the indexing criteria of the Scientific Electronic Library Online (SciELO), which are essential requirements for a journal to be considered scientific, are the scientificity of the content to be published, the editorial team that must have a board and a committee and the editorial policy that guides the entire operation, aiming to meet the basic requirements of quality, periodicity and visibility (Weersma et al. 2018).

However, the associated editors instead of the others, is not a mandatory practice, as it presents a greater need when the annual amount of submitted and admitted works

exceeds forty, but there are no obstacles that would make its existence unfeasible if the journal obtains fewer submissions. Immediately, the Scientific Editorial Board must be made up of researchers who have credibility and recognition before the academic community, with relevant participation in the routine of the editorial process. (ANPAD 2010). In this sense, the work of a journal's consultants is also essential to guarantee the quality of the manuscript of the productions, for this reason, according to ABEC (2017), the screening of reviewers must take place impartially, excluding specialists belonging to the same institution as the author, asking them to report any potential conflicts of interest. Segundo Shintaku et al. (2019). However, to achieve certain objectives, there must be a management in the editorial flow of the journal, which according to the authors Sandes-Guimarães and Diniz (2014) must be managed by two types of management: scientific and administrative, as shown in Fig. 1 below.

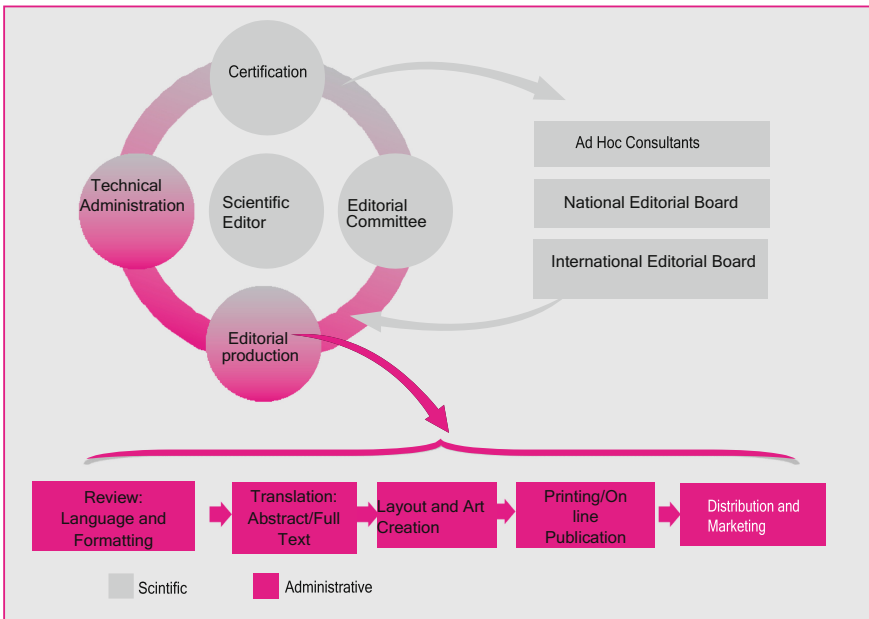


Fig. 1. Scientific and Administrative Management. Source: Sandes-Guimarães and Diniz (2014, p. 451)

The image presented, demonstrates the interdependence between the managements in the same process, and is managed by the Scientific Editor, who performs the communication between the parties in the process. Sandes-Guimarães and Diniz (2014, p. 453) state that.

Scientific management comprises the management of the journal's content certification process, aiming at the selection and dissemination of quality knowledge, supported by the actors involved in the process. Administrative management includes managing the publication process of a scientific journal. [...] for this, several activities are necessary, which briefly involve the processes of editorial and graphic production (text editing, layout editing, diagramming, printing); administrative and financial management (personnel management, financial resources, material resources, monitoring of outsourced services, etc.) communication and marketing (database indexing, sale and distribution))

(Sandes-Guimarães and Diniz 2014, p. 453). To manage the necessary resources in the editorial flow process and to obtain success in the results, which is to guarantee the publication of the journal's publications, the authors Spudeit et al. (2012) listed a system of indicators that will make it possible to understand the actions to be taken. be undertaken to achieve this end (Table 1).

Table 1. Proposal for a system of indicators of the editorial flow of the Scientific Journal

Criteria	Indicators
Qualis Classification	A stratum of classification of the journal in the triennium
Technical and normative adequacy of the journal	The proportion of issues according to the standards and specifications established in the journal's regulations
Editorial quality: adherence of the themes of the sections to the journal's thematic area, preserving the journal's mission, focus and scope; consistency of sections of the journal with the editorial line	- Proportion of sections of the issues according to the journal's purpose, spelt out and synthesized in its mission, focus and scope. - Proportion of sections (research articles, original and unpublished, reviews, research reports, etc.), by volume
Peer review	- Composition of the ad hoc panel of evaluators: - Percentage of its members linked to external institutions, with different institutional links of at least one per region - Percentage of institutional representativeness among ad hoc evaluators - Number of articles evaluated by the evaluator in the period of one year - Number of ad hoc reviewers for each section of the journal - Percentage of new evaluators registered each year
Editorial Board and Scientific Board	- Composition of the editorial board and scientific board: - Percentage of its members linked to external institutions in Brazil. - Percentage of representatives of foreign institutions.- Percentage of federation units represented on the council

(continued)

Table 1. (continued)

Criteria	Indicators
Authors	<ul style="list-style-type: none"> - Percentage of articles by authors affiliated with foreign institutions.- Percentage of articles by authors affiliated with external institutions (not including those with foreign authorship) - Percentage of authors with a doctorate, master's degree, specialists and students (undergraduate and graduate). - Percentage of authors linked to the institution sponsoring the journal
Frequency	- Proportion of editions launched on the date provided for in the regulation
Regularity of Editions	The average interval between submission and acceptance
Scientific quality	- Percentage of works evaluated and approved for publication, with or without restrictions
P Eternity	- Publication time, to measure the continuity of scientific publication
Visibility	<ul style="list-style-type: none"> - Access rate in the year. - Index of registration of new readers in the year. - Number of indexes in the repositories and/or catalogues of libraries in the year - Number of indexes in national and foreign databases, recommended by the area. - Index of visibility in search engines (Page Rank) between editions - Impact factor index for the triennium

Source: Spudeit et al. (2012, p. 112)

The monitoring of the criteria, as well as the related indicators, must be interpreted and analyzed according to the scope of the journal and its objectives, paying attention to its positioning regarding what it wishes to achieve in its publications.

3 Basis of Project Management

Project management (GP) emerged in 1958, based on the POLARIS project, which used the PERT technique as a central element of management and was managed by the American government (PAES 2014). However, with the constant market variations, in the 1990s, there was a consequence of significant growth in project management, both in Brazil and in the world (Carvalho and Rabechini 2015). According to Paes (2014), the number of organizations that are applying project management as something strategic has

been expanding considerably, making a model based on focus, priorities and objectives essential (Fig. 2).

PROCESSES GROUPS	KNOWLEDGE AREAS									
	Integration	Scope	Time	Cost	Quality	HR	Communications	Scratches	Stakeholder	Acquisitions
Initiation										
Planning										
Execution										
Monitoring and control										
closure										

Fig. 2. Project Management Process Groups and Knowledge Areas. Source: Lacerda et al. (2015, p. 616)

According to Toledo et al. (2008, p.117) state that: “And the degree of this success depends on management factors practised during the development of the project”. However, in the view of Besteiro et al. (2014), success in projects is an arduous task and depends not only on meeting scope, deadline, cost and quality but on the perspective of the project’s stakeholders (stakeholders), temporal and organizational aspects.

To obtain satisfactory results and decrease the margin of error, the concept of Critical Success Factors (FCS) emerged, which according to Rockart (1979, p. 85) is defined as: “a limited number of areas in which the results, if satisfactory, they will ensure a successful competitive performance for the organization. These are the few key areas where things must work out for the business to flourish”. Therefore, Vezzoni et al. (2011) present a table with some critical success factors, as well as the authors who identified them through the study, as shown in Table 2 below.

Table 2. Critical success factors

Critical Factors for Project Success	Description
Efficient communication	Its presence is essential in project environments, including organizations as a whole, to avoid duplicate information and to ensure that everyone involved in the project receives the necessary information at the right time and in the best possible way. from (Kerzner 2010)
Empowerment	Can be defined as the process of providing autonomy in decision-making so that they are made within acceptable guidelines about organizational culture (Geroy, Wright E Anderson 1998)

(continued)

Table 2. (continued)

Critical Factors for Project Success	Description
Flexible organizational structure	That for the project it is important in the sense that the organization meets the needs of customers quickly and efficiently. Also, this type of structure together with project management is essential for the company to be competitive (Damodara 2000)
Change management	Because even with all project planning, the execution is unlikely to follow exactly what was foreseen, so the necessary changes need to be managed, which is not always the case. One way to collaborate with this management is to involve stakeholders in the project throughout the execution (CicmiL 1997)
Requirements management	Because the requirements of a project are the conditions and restrictions that the project must meet (Kerzner 2010; Dinsmore e Cabanis-Brewin 2009)
Customer Involvement	Due to the customer's relationship with the organization, facilitating the obtaining of information regarding their needs, preferences and expectations and thus the possibility of improving the company's efficiency and costs Vickery et al. 2003)
Supplier involvement	The company must ensure good treatment with suppliers to offer services and products in a way that meets the requirements of the project (Dinsmore e Cabanis-Brewin 2009)
Conflict handling	Conflicts are inherent in projects and can occur related to cost, schedule and technical aspects, also, the best projects use conflict as a source of creativity and thus do not let them destroy the project (Dinsmore e Cabanis-Brewin 2009)
Creation of the project charter (TAP)	TAP also defines the initial requirements, restrictions, assumptions, the most important delivery dates, a preview of the project budget and an initial view of what stakeholders expect (Dinsmore and Cabanis-Brewin 2009)
Risk management	The project manager must recognize all risks, both at the beginning and during the execution of the project, which may need to be managed so that the project is not affected or is prepared to face them (Fortune and White 2006)

(continued)

4 Methodology

This research developed in this article is characterized as the approach as quantitative, since this type of research focuses on describing, explaining and predicting, that is,

Table 2. (continued)

Critical Factors for Project Success	Description
Resource allocation	When this allocation is miscalculated it can cause influences such as an increase in overtime, purchase of unplanned resources, delay in the schedule and changes in the budget, which can compromise the performance of the project (Belassi and TukeL 1996)
Top management support	When it comes to making available the necessary resources for the development of the project, the thought turns to top management, on the other hand, they can determine profitability, service quality and market share, the thought, in addition, the high management will be interested in how these resources will be used expecting efficient use and control by the project team (Munns e Bjeirmi 1996; Fortune E White 2006)

Source: Adapted from Vezzoni et al. (2011)

measuring something. The researcher's involvement is controlled and limited, to avoid bias, since the objective is to build and test theories, through probabilistic sampling (Cooper and Schindler 2011).

5 Results and Discussions

5.1 Characteristics of Respondents in Scientific Journals

Most of the participants, totaling 68.7%, have a link in the production of a journal, which is indexed on some scientific basis and inserted in directories, others have no link with the production of a journal corresponding to 6.25% of the sample and 25% intend to have involvement with the production of journals. Table 3.

Table 3. Types of scientific base and directories

Scientific Base	Directories
Cengage (Academic One File)	Catálogo Ulrichsweb
Citefactor PKP	Cite Factor
DOAJ (Directory of Open Access Journals)	Diadorim

(continued)

5.2 Criteria in the Light of Scientific Journals

To obtain a good evaluation with the approval of Qualis – Capes, scientific journals need to comply with some established standards so that they can receive a satisfactory

Table 3. (continued)

Scientific Base	Directories
EBSCO (Business Source Corporate Plus)	EBSCO
Gale Cengage Learning	IBICT
Google Scholar	LATINREV
LATINDEX	LATINDEX
LIVRE	LIVRE
OASISBR	ROAD
ProQuest (ABI Inform)	SciELO
Qualis Capes	Sherpa Romeo
Redalyc	ULRICH'S
REDIB	
RVBI	
SciELO	
SCOPUS	
South American Development Society Journal	
Spell (Scientific Periodicals Electronic Library)	
Sumários.org Sumários.org (Sumários de Revistas Brasileiras)	
Web of Science (Emerging Sources Citation Index)	
WOS	

Source: Research data (2018)

evaluation regarding the criteria of excellence and quality. The aspects covered in the research to assess the degree of use of the criteria by the journals in their editions are Qualis Classification, Technical-normative adequacy, Editorial quality, Peer review, Editorial and Scientific Council, Authors, Periodicity, Regularity of editions, Scientific Quality, Perpetuity and Visibility. Figure 3 presents, below, the most used criteria.

The parameters that stood out as the most used by journals, obtaining the highest weighted average were: Technical-normative adequacy and Editorial Quality, reaching an average of 4.4. Qualis Classification, Peer Review, Scientific Quality and Permanence, all reached the value of 4.1. However, the events that presented themselves as the most frequent, identified by fashion were: Qualis Classification, Peer Review, Scientific Quality and Permanence.

5.3 Criteria in the Light of PMBOK

The aspects analyzed in the research regarding the degree of contribution as Critical Success Factors of a Project were: Efficient Communication, Empowerment, Organizational Structure, Change Management, Requirements Management, Customer Involvement, Supplier Involvement, Conflict Treatment, Creation of Project Opening Term (TAP),

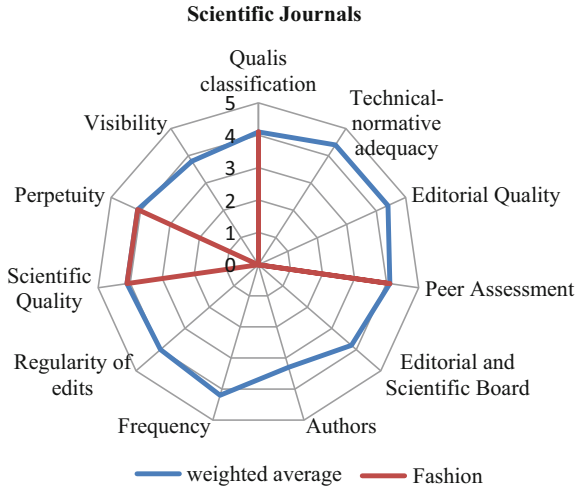


Fig. 3. Criteria of Scientific Journals. Source: Research data (2018)

Risk Management, Resource Allocation and Top Management Support. Figure 4 shows the main factors regarding the degree of contribution.

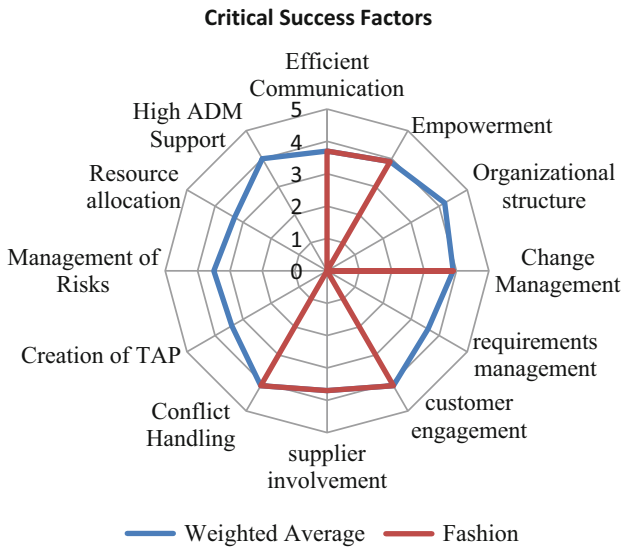


Fig. 4. Critical Success Factors for a Project. Source: Research Data (2018)

The data pointed out as the factors that most contribute to the success of a project, obtained through the highest value of the weighted average were: Organizational Structure with 4.2 on average; Customer Engagement and Conflict Handling resulting in 4.1 on average; Senior Management support obtaining 4.0 in the average value; Empowerment and Change Management achieving 3.9 on average; and Efficient Communication and Supplier Engagement with 3.7 on average. However, the elements indicated

as the most frequent, through the use of fashion were: Customer Engagement, Conflict Treatment, Empowerment, Change Management, Efficient Communication and Supplier Engagement.

5.4 Relationship Between PMBOK and the Scientific Journals Criteria

When analyzing the data obtained from the research, the fashion of the responses was considered, whose results point out the main elements, to those that are more frequent, both in their contribution and in their use. Thus, an integrated graph was created, obtaining the joining of these iterative points, as shown in Fig. 5 below:

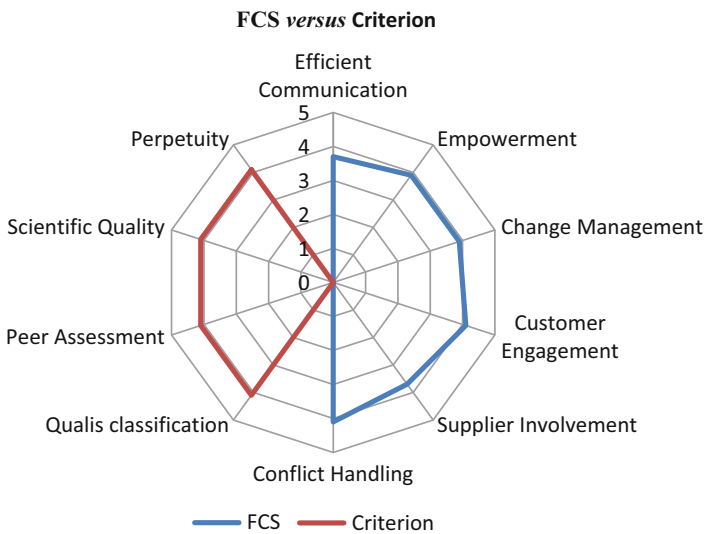


Fig. 5. Critical Success Factors for a Project versus Criteria for a Scientific Journal. Source: Research Data (2018)

When observing the graph, it is noted that the Critical Success Factors of a Project establish a cooperative relationship with the Criteria of a Scientific Journal, providing the achievement of a better result through the use of FCS, which must occur before, during and after the stages of the editorial flow, whose management of these factors is concentrated, exclusively, in the person of the Scientific Editor, main responsible for the communication between the parties in the process.

6 Conclusion

This research aims to analyze the contribution of the management of methods from PMBOK to the optimization of the Scientific Editorial Flow. For this, the literature on the management of scientific journals was first analyzed to identify the main stages of the publication process, as well as the main actors involved. It was identified that to make

the production of the scientific journal feasible, two types of management are necessary: the scientific one, responsible for the quality of the publication and the administrative one, designated by the technical and financial part of the journal. It was also analyzed, the PMBOK literature and its guidelines, as well as the main Critical Success Factors of a Project, which provide the conclusion of the project management stages satisfactorily.

The analysis was based on the use of the Likert scale, which sought to identify the most frequent elements used by the journals, through fashion and the weighted average, to ensure that the main attributes such as quality, periodicity and visibility were met. And to identify which FCS of a project would collaborate with the optimization of the journal, being measured from the degree of perception of the respondents of the research, through the average and the fashion determined. The results achieved point out that the FCS, based on the PMBOK methodology, contributes to the management of the editorial flow of the scientific journal are efficient communication, empowerment, change management, customer and supplier involvement and the treatment of conflicts. Efficient communication becomes essential in the development of a magazine, avoiding duplicate information and ensuring that others receive the information correctly and accurately, will optimize the time spent, thus avoiding rework. The characteristic empowerment presents in a project leader, which is based on four pillars which are power, motivation, development and leadership, also extends to the Editor, who is the main responsible for the journal's decisions and development, having access to the others that make up the magazine's teams. Managing the changes will help professionals to avoid the emergence of adversities that may hinder the speed of publication. The involvement of the customer and the supplier, who can be considered as everyone who has an interest in the publication of the journal, ranging from the authors, and partners to Financing Institutions, will contribute to a greater commitment in the participation of the roles that each competes for one. As well as, the treatment of conflicts that, once not managed, may prevent the publication of the journal. Based on the PMBOK guidelines and the attributes of Scientific Journals, the study has limitations regarding the use of FCS in the editorial flow, since there are several lists published by authors that, based on the practical application of projects, list several factors belonging to several areas of knowledge of the PMBOK, which may prove to be effective in its use. For future studies, it is suggested to analyze the five groups of project management processes based on the Good Management Practices of a journal.

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


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An Assessment of Challenges of Digitalization of Agrarian Sector

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Abstract. The study asserts that the digitization of the agriculture business is a significant trend that impacts not only economic development but also human progress. Digitalization is defined as the process of turning information into a digital format, and it is a process that influences all aspects of life, bringing about qualitative changes and influencing human development. In Ukraine, where the agricultural sector is the engine of economic development, the digitalization of this sector becomes the most crucial implementation task. On the way to digitalization, Ukrainian agricultural companies have made significant strides, but a large number of problems remain unresolved and constitute potential impediments. Initial focus should be made on combining the use of digital technology with the proper training of all levels of personnel who can operate in the new environment. Then it will be possible to ensure both economic and human development goals are met. To achieve this, government activities on all levels must promote the digitalization of the agriculture economy.

Keywords: Agrarian industry · Digitalization challenges · Digitalization · Human evolution

1 Introduction

Agriculture sector digitalization in Ukraine and other countries entails modifications to Food security and the production of agricultural commodities and services. Digitalization offers vast opportunities for environmental, financial, sociological, and cultural progress. Concurrently, there exist hurdles and hazards that can result in both predicted

and unforeseen long-term outcomes. Inequalities in the availability of digital technology result in discrepancies in the ability of individuals in Ukraine and other nations to engage in economic activities, particularly in agriculture. Large agrarian corporations are focused on using digital technologies to reduce costs and increase output, yet problems related to digital technology among villagers might cause people to resist innovations and even trigger crises. Those that fail to successfully integrate digital technology into the manufacturing process run the risk of falling behind in regards to productivity, social and financial progress. To realize the true value of the transformation of the agricultural industry by digital technology, it is necessary to establish a well-considered economic policy that prioritises human development.

2 Literature Review

Various theorists in the sphere of the agrarian sector continually discuss issues related to digitalization. Negroponte N. (1995) initiated the term “digitalization” and defined it. In his work, Negroponte explores profoundly numerous facets of the general digitalization process.

In recent years, the number of Ukrainian researchers focusing on digitalization issues in many departments and sectors of the domestic economy has increased. In Reznik N's, Kozhemiakina S'., Cherkasov A's., Zhuravka O's., and Mazunrov S. 'researches, an innovative solution to the issue of predicting new employment in the industrial sector of the Ukrainian economy was specifically sought (2018). L. Lazenbyk conducted study on the digitization of economic interactions as a factor in improving the business operations of organisations (2018).

Academics in Ukraine continue to be interested in the innovation and digitization of certain agronomic routes within the industry. For instance, N. Reznik, R. Levkina O. Sakovska, A. Ostapchuk, S. K. Gupta, and A. Ostapchuk have researched the hurdles to the development of oilseeds and their subsequent interchange on the worldwide market (2019).

Despite the significance of the research previously conducted by academics, several aspects of the digitization of the economy have gone overlooked. The essay discusses the issues in the context of human advancement, digitization of the agricultural sector because this was judged a pertinent and beneficial topic for research.

The primary objectives of this research are to demonstrate the importance of the agrarian sector to the Ukrainian economy, to outline the sector's current digitalization achievements, and to outline the principal remedies for the issues that occur as a result of digitalizing the agrarian sector.

3 Research Methodology

To attain the given research objective and complete the indicated objectives, A collection of established scientific processes and methodologies were employed The approach of template matching was utilised to conceptually establish the significance of studying the issues of digitization in the agricultural industry from the perspective of human development. Utilizing synthesis and analysis enabled for the illustration of the agricultural

sector's relevance to the economy of Ukraine and its current digitalization accomplishments. The concept of locating logical linkages was used to illustrate the importance of simultaneously introducing innovations and preparing personnel for their manipulation. For a visual depiction of the study's findings and their diagrammatic depiction, a method of developing schemes and models was employed.

4 Results

Today, The digital world permeates every aspect of society and economy, from time management to money management. The digitalization process is altering the conventional means of communication and entertainment. Millions of websites collect information, although the Internet can substitute TV, periodicals, and other publications. People are getting used to communicating through email, online communities, and weblog and exchange vital data and statistics; They have evolved into digital customers who make internet purchases. Analysts estimate that e-commerce sales of tangible goods and services increased by 30% in 2017, surpassing about 50 billion UAH by year's end. In 2018, e-commerce sales of physical goods and services were 65 billion Ukrainian Hryvnia [3]. It investigates the inclusion of local companies into the worldwide trend of digitalizing economic connections.

N. Negroponte, an American physicist, in 1995 introduced the phrase "digital economy." [9]. Since the early 20th century, exponential spread of digitalisation processes throughout every aspect of economic activity has led to the growth of the notion of a digitalization. As early as the first decade of the twenty-first century, it was apparent that only a nation that properly integrated digitalization into its economic structure would be prosperous and successful. Because all modern sophisticated market systems are digital, digitalization of the economy has become a criterion for the progress of a nation. The digital processes have necessarily been hastened in (the U.S., Europe, and Asia's developed nations). However, this idea is still ambiguously construed. Specifically, the The digital industry is dominated by information and knowledge, and networks. Digitization, in our view, can be acknowledged as an information-based process, specifically The digitization of huge volumes of information and knowledge, which contributes to qualitative gains in human and economic progress. Digitalization is essentially the process of transforming data into digital form, or "translating" text, music, and vision into a code that can be comprehended by computer.

Globally, every facet of professional life is currently being incorporated into the virtual space. Digitalization profoundly alters business by decreasing manufacturing costs and increasing labour efficiency. As a result of digitization, there are new advertising tactics that may aid in the promotion of goods, as well as new, creative approaches to management in all sectors. Some firms cannot maintain competitiveness in the current market climate if they disregard digitization. Everything in the management of a business, from the accounting system to the creation of a company's reputation, is related to digitization in some way or another nowadays.

As for the notion that Not only does digitalization determine economic growth patterns, but it also influences the human development cycle. It is vital to mention that digitalization makes people's life easier, improves their quality, creates new employment

opportunities, and consequently alters people's ways of thinking by expanding their horizons. All of them are witnesses to the enormous changes that are occurring in our time and that might be observed. This transition is described by the term "digitalization of social and economic life."

Macroeconomic Fundamentals for Ukraine Agriculture is currently one of the most dynamically expanding industries and plays a vital role in society. Due to the high number of people residing in the rural areas, it has a significant relationship with human development and is often considered as a social boost for the young people born there. It is a commonly held belief that the economy of Ukraine has experienced a number of catastrophes, but that The agricultural industry has not changed the economic engine throughout. There are four primary factors that helped Agrarians are necessary to sustain growth pace of the industry. The first reason is a relatively advantageous geographical location that facilitates global communication. Two-thirds of Ukraine's area consists of fertile soil. Weather and climate conditions are the third cause. And indeed the fourth is obligated agricultural labourers.

The agricultural industry has dominated the Ukrainian economy for the past decade. It accounts for 10 to 12% of the nominal gross domestic product of Ukraine, rendering it one of the world's top three economies. This industry employs approximately 17% of the labour force. In 2017, nominal agricultural GDP reached \$11.5 billion, a 6% increase from 2016's nominal agricultural GDP of \$10.8 billion. [1] A variety of natural resources being readily available which is a distinguishing feature of the Ukrainian agriculture sector. The agricultural region of Ukraine comprises 41,9 million hectares, or 69.4% land area. There are 33,3 million hectares of arable land in Ukraine, which is greater than the total agricultural resources of all European nations. In addition, 2.2 million hectares are devoted to hay production, 5.3 million hectares to pastures, and 1.1 million hectares to annual crops. In the agricultural sector, unlike in the majority in other industries of the economy of Ukrain, Capital and construction projects, as well as profitable debt management measures, company reorganisation, donor organisation activities, and technical assistance projects, may be examined by scholars. Existing successful projects include, among others, the EBRD and Cargill partnering venture in the building projects of a grain station in the harbour of "Yuzhny," a number of operation sources of funds in favour of agricultural producers of Ukrain, and the productive reconfiguration of Ukraine land farming's financial liabilities of about \$600 million [6].

Owing to these optimistic signs, Ukraine has the potential to become a worldwide agricultural leader. Clearly, the export of items with low added value, i.e. the exporting raw resources, remains the major objective. This is characterised by a dearth of investments in high-tech manufacturing and the absence of government programmes targeted at encouraging the creation of such products. Simultaneously huge yield-growing regions and fertile soil quality enable for successful yield-raising and subsequent sales. It is worth noting that in the United States, for instance, exports of unprocessed corn and soybeans are similarly large due to their cultivation potential. This means that a nation with such large agricultural land as well as high-quality soil will always be exported from these regions. Agricultural raw materials. This is a universal practise, not a Ukrainian peculiarity.

Concerning the digitalization of the Ukrainian agriculture industry, it should be emphasised that the worldwide digitalization and automation of all agriculture activities is predicted to occur within the next few years. This necessitates the use of cutting-edge technologies and customised IT solutions on a massive scale. Already now, Ukrainian agricultural enterprises employ inventions that have no equivalents in any other Ukrainian industry.

In the last five to seven years, the agricultural sector has undergone profound changes. The agriculture sector in Ukraine has reached a remarkable different dimension, with the principles of work, techniques, and the development of transparent business models. Prior to this, the government and international organisations paid insufficient attention to the agriculture industry's development. As the world's population continues to rise, more and more focus is being placed on the agricultural sector, and in particular on the agricultural sector of our nation, which possesses a unique agricultural potential. This prompts businesspeople in the industry to consider introducing innovations, enhancing technologies, and learning to handle all operations properly.

Today, the Farming Management System is utilised in the fields of Ukraine, which includes satellite internet monitoring, GPS navigation, mapping, and the utilisation of drones. The research centres have weather station networks. In addition to technological advancements, agricultural production is aggressively incorporating IT innovations.

Large Ukrainian agrohholdings are responsible for the majority of programmes aimed at the digitalization of the agricultural industry. For instance, Since the beginning of 2016, Kernel Agro Holding has implemented an advanced Digital Agri-Business software package across its companies. This strategy has allowed a single field to yield the most profit and output. The tool provides agronomists, engineers, and other departments with potential solutions based on previously stated methodologies. The Digital Agribusiness project is a one-of-a-kind IT system that provides utmost control over the execution of all technical tasks, including data analysis and effective production adjustment management. MHP (Ukrainian acronym for Myroniv Breand Products) has also provided an exciting solution for the digitization of agricultural product production. In addition, MHP is among the minority of Ukrainian agricultural companies having a specialised innovation division. The firm develops a variety of geographic information systems (GIS) that help in the administration of an existing land bank on its clusters. Legislators of the agriculture standing firm say that this technology allows the business to hasten data analysis processes and develop unique algorithms for effectively executing a range of consumer demands. [5].

To continue the digitization of the agriculture sector in Ukraine efficiently, it is necessary to address both general and country-specific obstacles. To make agricultural production as effective as possible, it is vital to recognise the importance of two aspects. (Fig. 1) These are technologies that are regularly adapted into digital formats and then taught to individuals. If consumers are reluctant or unable to utilise these technologies, for example due to a lack of knowledge, the corporation might face a severe catastrophe. In the past, untrained employees in massive factories destroyed new machinery that were intended to be put into production in order to keep operations operating. Obviously, such brilliant expressions of creativity do not occur in the contemporary environment, where it

is common to find underlying opposition to advances that change too rapidly for individuals to have time to adapt to them. It is not uncommon, for instance, to deploy tractors that operate without human intervention or production lines that are totally managed by a single skilled operator. This helps agricultural firms optimise expenses, operate in novel methods, and achieve high-value-added items in the end. This, however, needs the employment of skilled individuals who are able to use and manage such technologies. This may be a professional technician or a middle-level agricultural administrator. However, he or she must have technical skills and be equipped to employ the proper machinery at any moment. As a result, employee education and training become crucial aspects in offering the digitization process in practise.

There is no need to combat opposition to innovation; rather, people must be prepared for innovation. The more the penetration of technology into an agro-business, the more specific the change management programme must be to reduce the shock and stress and convince employees to accept the necessity of changes. In the agricultural industry Kernel of Ukraine, for instance, a software called “mobile agronomist” is being implemented to control the login statistics. Numerous security professionals were let go when the system was put into operation as component of a prototype in one of the nodes since creating the new product was too challenging for them. Instead of tearing people down, it is essential to engage with them and illustrate how design allows their tasks simpler and more productive. Nevertheless, some individuals are unable to accept this truth and will be discarded as a consequence [4].

In addition, to digitally alter agriculture in varied situations, several conditions must be satisfied. The fundamental ones might be seen as the minimal requirements for implementing technology. These include accessibility, affordability, the capacity to connect, various educational programmes that increase people’s informational abilities, and government regulations that encourage digital growth.

As for the supporting circumstances, they are primarily the characteristics that may lead to widespread acceptance of agricultural technology by agricultural workers. World wide web, cell telephone, and online social networks, development of digital abilities, and promotion of digital culture in agriculture are examples of such well-known elements. Almost all of these characteristics may be applied via talent development, sprint programmes, incubator use, and the introduction of various accelerator programmes (Fig. 1).

The digitization process is inaccessible to those who lack basic reading and numeracy skills. Unlike other African and Asian areas, this issue is not one that must be addressed in Ukraine. All Ukrainians, whether they live in a city or a hamlet, have fundamental knowledge and get a basic education, and they are often active in gaining a higher education. In rural parts of Ukraine, the participation rate in higher education is very high compared to that of many other nations, but it is substantially lesser in metropolitan regions (Fig. 2).

Nonetheless, “digital literacy” is a barrier for rural residents. Due to a lack of material and technological resources, basic computer instruction has not yet been included into elementary and secondary school in the communities. In contrast to affluent nations where students routinely employ, internet access has not been developed everywhere in

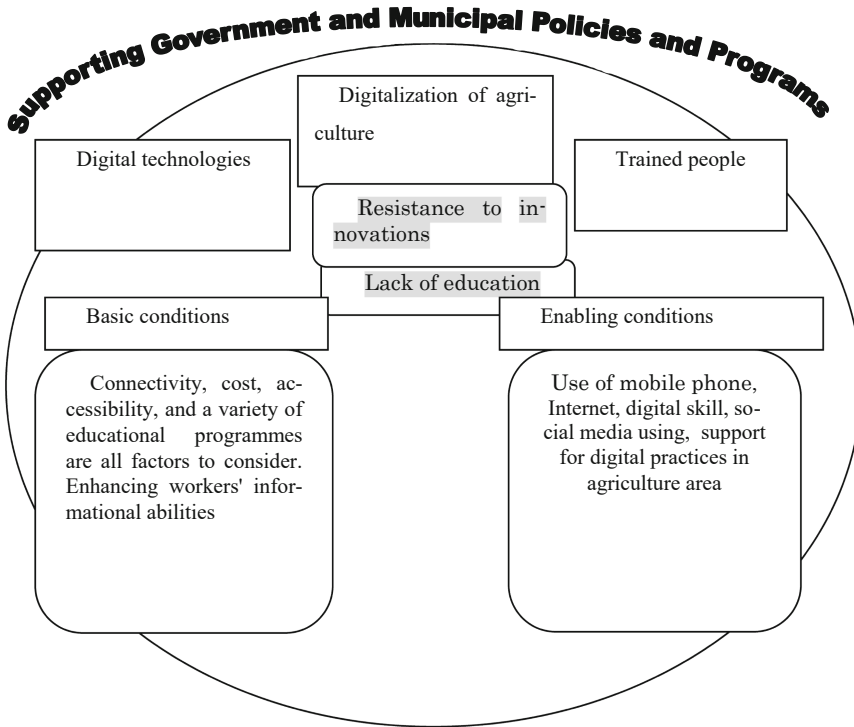


Fig. 1. Conditions and variables that characterise the digitalization of agriculture. * *Author-created source based on [2]*

Ukraine, limiting the use of modern technology and digital skills in school and everyday life.

In addition, instructors often demonstrate a lack of appropriate abilities. The World Bank identifies attempting to create the menial work in the agri-food sector while maintaining existing employment as one of the tremendous difficulties in the digitalization of agriculture. In the following 2 decades, as 1.7 billion individuals will reach the age of employment in developing countries during that time. [2] The digital transformation of economy will fundamentally alter the nature of employment and the need for labour as well as competencies. Technical knowledge will emerge as the primary prerequisite for a variety of employment in the industry, and education level will become vital. In Ukraine’s rural areas, there is still a dearth of digital tools such as laptops and tablets, which might lead to a crisis in innovation due to a dearth of individuals capable of operating modern technology and equipment.

To tackle the problems posed by the digitization of the agricultural industry and establish the conditions for successful human development, the government must implement a well-grounded strategy.

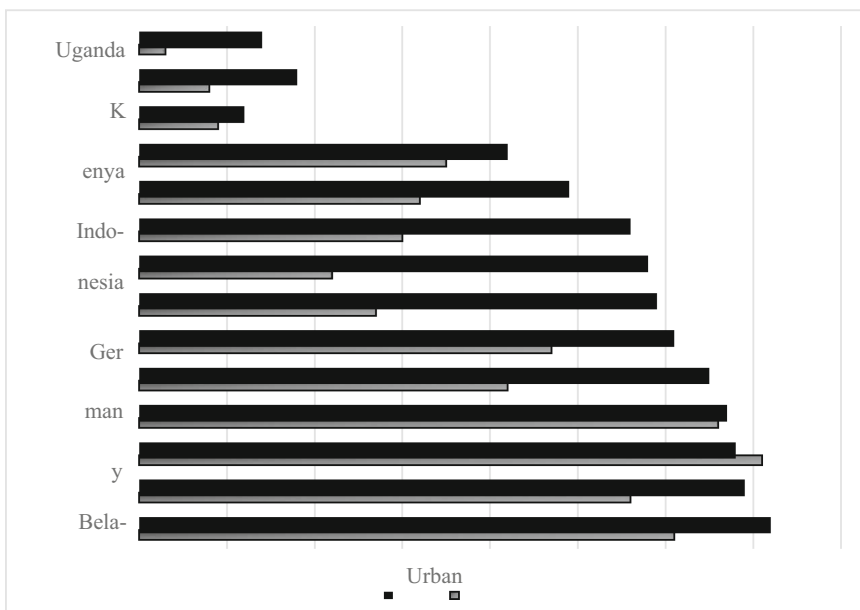


Fig. 2. Participation in higher education as a function of urbanisation (%). *Source: made up by the authors based on [2]

5 Discussion

The digitization of the agricultural industry is the dominant trend in the present environment and cannot be ignored or avoided. The decision not to deploy digital technology in the industry may expand the disparity between the Ukrainian economy and the economies of the world's wealthy nations. Considering the agricultural sector's significance to the Ukrainian economy, the process of incorporating digital technology inside it should be prioritised.

Incorporating digital technology into the sector not only aids in achieving the economic objectives of agricultural businesses especially and the industry in general and yet also addresses concerns of human development, standard of living, and psychological wellbeing.

However, rapid digitization of the agricultural industry may be met with resistance due to people's unwillingness to embrace change, education, and new management styles. Because of this, the implementation of the process of digital modernisation should be well-organized and progressive that is accelerated through concurrent worker training.

6 Conclusion

Consequently, the digitization of the agriculture industry has an important influence in the current state of Ukraine and other nations. Due to the fact that, on the one hand, the agriculture sector may be regarded a motor of economy of Ukrain and, contrary to this,

digitization is a mechanism that produces significant shift in every aspect of life, hence boosting socioeconomic growth, this is the case. Significant market players and industry leaders have designated the digitization of agriculture as their responsibility. It is crucial for them to attain consistent high outputs at minimal costs, enabling them to produce high-quality, low-cost products. This is significantly aided by advanced technologies. Simultaneously, as a consequence of digitalization, the quality of people's lives is altering, new working environments are emerging, people's perspectives are shifting, and standard of living are increasing.

Numerous important ideas and technologies are now being introduced by representatives of significant agricultural corporations and integrated into the production of agricultural commodities. However, the fundamental issue that emerges is that people in rural regions are not adequately prepared to use these technological advances. The answer to the issue is the implementation of government-sponsored initiatives to improve the e-literacy of rural residents, as well as the establishment of conducive environment and a digital culture.

Practical Implications. The study findings may be considered as a source of knowledge on the stages involved in the digitalization of the agricultural industry to promote human development and economic growth.






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Effective Utilization of Marketing Strategies by Independent Textile Retailers in Post Pandemic Scenario

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Abstract. Retailing is a process of selling merchandise or some sort of service directly to large set of customers. Retailers enable the customers to purchase products of their choice in shops located in close proximity and assume a prominent role in the distribution channel. Small scale retailers are those retailers who have lesser scale of operation and restricted to a small segment of the market. Stocking large variety of customary stuff in small quantities is the operational mode of a small scale retailer. Retailing occupies an important role in the economic growth of any country. The Indian retail sector is characterized by small retailers who are mostly unorganized. This sector is a mix up of opportunities and obstacles. The success of the small stores more depend on their relationship with the customers and the adoption of suitable marketing strategies.

Keywords: Retailers · Customer · Distribution · Channel

1 Introduction

Retailing is a process of selling merchandise or some sort of service directly to large set of customers. Retailers enable the customers to purchase products of their choice in shops located in close proximity and assume a prominent role in the distribution channel. Personal relationship by the retailer with the customers who reside in the close proximity helps them to understand their varied tastes and stock products accordingly. This relationship paves way for understanding the problems of manufacturers and customers who are on the extreme ends of the supply chain.

Retailers support wholesalers and manufacturers in many ways like storage of goods, communication of customer desires and transportation of goods. On the other hand, they help customers by providing small and convenient packages, act as advisor and educate about uses of a product.

Small scale retailers are those retailers who have lesser scale of operation and restricted to a small segment of the market. Stocking large variety of customary stuff in small quantities is the operational mode of a small scale retailer.

Transformation in every industry is evident as time and preference changes. This has become more evident in this post pandemic situation. Retailing is not an exception to the change. Gone are the days where the role of manufacturer is mere manufacturing the product and retailer to sell the produced merchandise. More than merchandising, understanding the choice of customer has become more important.

1.1 Statement of the Problem

Retailing occupies an important role in the economic growth of any country. The Indian retail sector is characterized by small retailers who are mostly unorganized. This sector is a mix up of opportunities and obstacles. Every sector in retail throws a different set of problems to small retailers against large retailers and textile sector is no exception for it. Large scale retailers are relatively successful than small retailers in every aspect of business like accomplishment of apt marketing strategies, purchasing, finance etc. Independent textile retailers suffer from operational issues, merchandising, raising of funds etc.

Further rigid competition from large scale textile retailers makes the existence of independent textile retailers as a question in some parts of the country. The success of small scale retailers solely depends on how they perform in the market place at a given point of time. Hence the study attempts to point out the issues and challenges in marketing of independent textile retailers in the post pandemic scenario.

1.2 Objectives of the Study

Objectives framed for the study are as follows:

- To study the factors influencing the effective utilization of marketing strategies by independent textile retailers.
- To measure perception of independent textile retailers regarding challenges faced in their business.

1.3 Research Methodology

1.3.1 Area of the Study

Coimbatore named as “Manchester of South India” is chosen to study the effectiveness of marketing strategies adopted by independent textile retailers.

1.3.2 Sources of Data

Primary data is collected from 250 independent textile retailers and secondary data from printed and online published sources.

1.3.3 Sampling Design

For the purpose of the study, 250 respondents were selected using convenience sampling method.

1.3.4 Tools for Analysis

The following statistical tools are used in this study in tune with the objectives.

- Percentage analysis
- Average score analysis
- Factor analysis

1.4 Limitations of the Study

- Data were collected from 250 textile retailers and the study has been confined to Coimbatore city only.

1.5 Review of Literature

Study by Wesley Niemann, Karabo Manny, Theuns Kotzé (2018) [1] identifies the global sourcing has increased as buyers searched for new markets that offered better pricing, quality, variety and delivery lead times than their local markets. However, the increase in global sourcing has also exposed businesses to many supply risks. Small clothing and textile retailers need to proactively identify and manage global sourcing risk using the identified approaches in order to reduce and mitigate potential supply disruptions.

A study by Madhurima Deb (2014) [2] identifies that a central role in retailer customer long-term relationships is played by customer-level attributes along with store-level attributes. Proper knowledge of factors and continuous efforts leads to retain a customer and have a lasting relationship.

Vikram Gahlawat & Pankaj Kumar (2014) [3] in their article discuss about selecting and training employees cautiously. Since people are the driving force in maintaining personal touch with the customers, special attention should be given to human resource management.

The choice of apparel shoppers in India and the influencing factors which drives them in decision making was studied by Rituparna Basu, et al. (2014) [4] Factor analysis was used to measure the results and it was found that five store attributes influences the decision of the buyers. The shoppers expressed their interest towards organized retail stores and expected the stores to have multi brands rather than a single brand.

Khare Arpita (2014) [5] opined that most Indian consumers prefer to shop with small retailers. The factors which attract the consumers towards small retailers are service, personal relationship and store facilities. There is a difference in preference pattern between the young and the aged customers. The study concludes that the service and the personal relationship help the small retailers to compete with the organized retail sector to an extent.

A comparative study of consumer preferences between online and offline purchases was conducted by Sunil (2013) [6] The study points out certain factors like advancement in information technology, accessibility to internet, use of smart phones and banking services have improved the scope for e-tailing. This increases customer choice of products

and even accessibility to international markets is made possible. This gives a competitive advantage to online stores and poses a threat to traditional stores. On the contrast, physical stores also have some competitive advantage like physical feel of the product, lower price, product assortment and easy information about the products (Tables 1 and 2).

1.6 Findings

Table 1. Table showing the Percentage Analysis: Allocation of respondents based on the agreeability

Statements	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Marketing of textile products is not a difficult task	47 (18.8)	136 (54.4)	20 (8.0)	47 (18.8)	-	250 (100)
Customer response towards textile products is encouraging	28 (11.2)	149 (59.6)	47 (18.8)	26 (10.4)	-	250 (100)
Sales during festivals give us more earnings	59 (23.6)	132 (52.8)	35 (14.0)	24 (9.6)	-	250 (100)
Suppliers deliver the material promptly (punctual) and thus support us	19 (7.6)	120 (48)	76 (30.4)	35 (14.0)	-	250 (100)
Sales persons involvement towards selling the goods	39 (15.6)	98 (39.2)	67 (26.8)	30 (12.0)	16 (6.4)	250 (100)
Offers given to the customers make them to buy	40 (16.0)	96 (38.4)	78 (31.2)	28 (11.2)	8 (3.2)	250 (100)

(continued)

Table 1. (continued)

Statements	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Sales persons relationship with customers are very pleasant (cordial)	28 (11.2)	112 (44.8)	73 (29.2)	29 (11.6)	8 (3.2)	250 (100)
We take sufficient steps to compete with big shops	28 (11.2)	96 (38.4)	82 (32.8)	25 (10.0)	19 (7.6)	250 (100)
Returns in this business is satisfactory	55 (22.0)	132 (52.8)	34 (13.6)	25 (10.0)	4 (1.6)	250 (100)
The customers always expect the products to be durable	47 (18.8)	110 (44.0)	55 (22.0)	26 (10.4)	12 (4.8)	250 (100)
Facilities given in the shop for the customers and sales persons are quite satisfactory	36 (14.4)	125 (50.0)	55 (22.0)	30 (12.0)	4 (1.6)	250 (100)
Competition with the nearby shops make me to think differently	44 (17.6)	116 (46.4)	53 (21.2)	37 (14.8)		250 (100)
Customers react positively towards advertising for textile products	43 (17.2)	101 (40.4)	59 (23.6)	40 (16.0)	7 (2.8)	250 (100)
Customers are satisfied with the pricing of products sold	27 (10.8)	96 (38.4)	96 (38.4)	24 (9.6)	7 (2.8)	250 (100)

(continued)

Table 1. (continued)

Statements	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Total
The price of textile product is reasonable	27 (10.8)	106 (42.4)	56 (22.4)	50 (20.0)	11 (4.4)	250 (100)

Note: values given in brackets are in percentage.

Table 2. Table showing the Average score – Organizational factors and level of agreeability on the various aspects relating to retailers

Organizational Factors	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14	F15	
Nature of business	Sole trading	4.06	3.68	3.97	3.38	3.34	3.50	3.48	3.39	3.94	3.94	3.75	3.91	3.89	3.48	3.23
	Partnership	4.06	3.97	3.94	3.69	3.63	3.31	3.37	3.06	3.83	3.32	3.60	3.52	3.36	3.08	3.09
Experience in business (years)	Less than 5	4.24	4.00	4.18	3.76	3.43	3.25	3.13	3.49	4.09	3.67	3.67	4.00	4.12	3.82	3.52
	5 – 10	3.78	3.93	4.15	3.71	3.93	3.64	3.56	3.42	3.85	4.08	3.93	4.07	3.64	3.35	3.35
	10 – 15	4.05	3.70	3.77	3.44	3.44	3.36	3.52	2.80	3.74	3.71	3.42	3.58	3.55	2.91	2.82
	15 years and above	4.00	3.32	3.74	2.97	2.97	3.55	3.55	3.23	3.90	3.34	3.65	3.39	3.28	3.07	2.97
Initial capital	Own capital	4.03	3.86	3.96	3.55	3.32	3.20	3.40	3.40	3.87	3.91	3.64	3.83	3.82	3.51	3.24
	Borrowed capital	4.22	3.67	3.76	3.01	3.13	3.31	3.10	2.91	3.73	3.59	3.61	3.55	3.19	2.97	2.71
	Both	3.82	3.58	4.15	3.79	3.91	4.00	3.82	3.24	4.12	3.39	3.73	3.82	3.82	3.21	3.45
Source of borrowing	Banks	4.11	3.53	3.81	3.40	3.34	3.84	3.70	3.23	4.16	3.57	3.75	3.81	3.36	3.07	2.99
	Financial institutions	4.09	3.82	3.91	3.51	3.60	2.93	2.89	2.53	3.42	3.38	3.29	3.38	3.31	3.18	3.18
	Friends and Relatives	3.78	3.65	4.00	3.04	3.57	3.57	3.48	3.09	3.83	3.48	3.57	3.65	4.00	3.30	3.39
Organizational Factors	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14	F15	
Number of sales persons	Upto 3	4.00	3.95	4.09	3.67	3.51	3.33	3.33	3.23	3.93	3.98	3.74	3.91	3.86	3.81	3.72
	4 – 6	4.05	3.58	3.89	3.30	3.40	3.21	3.60	3.51	3.91	3.70	3.68	3.83	3.44	3.23	2.95
	7 – 9	4.18	4.07	4.20	3.70	3.77	3.57	3.47	2.88	3.93	3.60	3.60	3.73	3.65	2.98	2.75
Working hours of the shop	10 and above	3.65	2.61	3.04	2.70	2.35	4.35	3.13	3.13	3.65	2.87	3.39	2.96	3.65	2.35	2.87
	Upto 8	4.05	4.00	4.13	3.40	3.78	3.65	3.94	3.54	3.87	4.00	3.84	3.68	3.66	3.53	3.22
	8 – 10	4.04	3.93	4.13	3.65	3.56	3.34	3.18	3.13	3.92	3.71	3.77	3.96	3.75	3.57	3.36
	10 – 12	3.87	3.14	3.65	3.11	3.11	3.62	3.40	3.02	3.75	3.43	3.59	3.33	3.56	2.70	2.67

Note: F1 –F15 indicates the factors of agreeability

It is observed from the table 78 that majority of the respondents irrespective of their organizational classification have high level of agreeability towards marketing of textile products is not a difficult task (F1), followed by sales during festivals give us more earnings (F3), customer response towards textile products is encouraging (F2) and so on. It is concluded that the majority of the respondents have high level of agreeability towards marketing of textile products is not a difficult task (F1), followed by sales

during festivals give us more earnings (F3), customer response towards textile products is encouraging (F2) and so on (Table 3).

Table 3. Table showing the Factor Analysis - Level of agreeability towards the various aspects relating to small scale retailers

Agreeability factors	Group 1	Group 2	Group 3	Group 4
Suppliers deliver the material promptly (punctual) and thus support us	0.613	-	-	-
Sales persons involvement towards selling the goods	0.644	-	-	-
Offers given to the customers make them to buy	0.529	-	-	-
Sales persons relationship with customers are very pleasant (cordial)	0.597	-	-	-
Returns in this business is satisfactory	0.667	-	-	-
The customers always expect the products to be durable	0.623	-	-	-
Facilities given in the shop for the customers and sales persons are quite satisfactory	0.750	-	-	-
Competition with the nearby shops make me to think differently	0.610	-	-	-
Customers are satisfied with the pricing of products sold	0.747	-	-	-
The price of textile product is reasonable	0.693	-	-	-
Marketing of textile products is not a difficult task	-	0.574	-	-
Sales during festivals give us more earnings	-	-	0.671	-
We take sufficient steps to compete with big shops	-	-	0.657	-
Customer response towards textile products is encouraging	-	-	-	0.686
Customers react positively towards advertising for textile products	-	-	-	0.647

It is concluded that the various aspects considered are classified under 4 factors such as functional factors, marketing oriented factors, sales oriented factors and customer oriented factors with an important aspect supplier delivering the material promptly, marketing of textile products is not a difficult task, steps taken to compete with big shops and customer response towards textile products is encouraging.

1.7 Recommendations

- Success in India's retail market is not an effortless task and is achievable with the combination of the following recommendations.

- Store ambience: Store ambience should be improved by adopting various techniques for product display, planning the store space and assortment. As store ambience carries store image in customer's minds, the ambience should be concentrated.
- Training the employees: Selling in retail is much about personal feel and relationship more than buying a product. The employees should be trained in such a way so that they have complete knowledge of the store and are able to convince the customers with their requirements.
- Retention of customers: Cost of acquiring a new customer is higher than retaining an old customer. Moreover in case of physical store a returning customer is a good sign that shows the customer's taste and preference is understood by the retailer.
- Role of retailers association: Association with registered associations, fellow retailers will give a complete knowledge about the banking procedures, Government schemes, exhibitions and current trends in the market.
- Supply Chain Management: Managing supply chain is very essential for every business without mention to the scale of business. The small retailers with already limited resources should keep the supply chain as short as possible to reduce cost.

1.8 Conclusion

India has become a level playing ground for retailers all over the globe. The present study concludes that the retailers in textile products are moderate in implementation of marketing strategies and practices. Even though the problems are highly perceived by the retailers, there is a higher opportunity for textile products in retailing. The challenges in marketing of textile products are higher among small and medium retailers when compared to large retailers. Adoption to the upcoming changes is very important for the survival of small retailers in the market. The small retail organizations / retailers are put into the task of attracting new consumers and retaining the present customers. The success of the small stores more depends on their relationship with the customers and the adoption of suitable marketing strategies.

1.9 Future Research

The present study is an attempt to identify the effective utilization of marketing strategies by independent textile retailers in Post pandemic scenario. Further research can be done including all forms of retailing, promotion strategies of retailers and not only textile other areas of retailing can be considered.







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Purchase Intention Based on the Brand Value of Pharmacies in a Locality of the Peruvian Highlands

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Abstract. The aim of this research was to identify the relationship between brand value and purchase intention in pharmacies in the city of Huaraz, 2021. The type of study that was applied was observational, with a correlational, transactional level not experimental. To collect the information, a 22-question questionnaire was applied on the Likert scale. The study comprised a total city of 180,000 consumers, with a stratified sample of 384 consumers from the most recognized pharmacies (Inkafarma, Farmarecuay and Mifarma) in the pharmaceutical sector within the city. In the results got, it was evidenced that there is a moderate positive significant correlation of 0.634 based on the general hypothesis of brand value and purchase intention, while, of the four specific hypotheses, the brand loyalty dimension is the one with the greatest impact in the purchase intention.

Keywords: Consumer · Brand value · Pharmacy · Purchase intention

1 Introduction

Pharmacies have become an indispensable organism in the health system of any society, since thanks to the role they play together with the pharmaceutical professional, they have led to an improvement in the lifestyle of users, and today, besides offering different products, consumers can also make consultations and receive suggestions, and they can go at any time of the day without the need to make an appointment, since 95% of the population generally has a pharmacy near their home [1, 2]. In addition, pharmacies would not be able to function without the pharmaceutical industry, which has made it possible to carry out research that has led to the improvement and development of new drugs [3].

According to the ranking of countries that have generated the highest sales in the pharmaceutical sector, the industrialized countries occupy the first places, as is the case of the United States [4], which ranked first with 533.5 million USD, followed by China with 93 million USD, and in third place Japan, which obtained a sales volume of 79.2 million USD; making a comparison with the United States, which has the highest sales volume in the pharmaceutical sector, the United States is in first place with 533.5 million USD, followed by China with 93 million USD, and Japan in third place with a sales volume of 79.2 million USD. A comparison between the first three positions shows that the United States, as one of the great powers in the world, stands out in the pharmaceutical market as the strongest thanks to its large sales recorded during 2020, mainly due to the great impact brought about by covid-19 [5].

In the case of Peru, the brand value as a country until 2019 was in 37th place worldwide and ranked second among Latin American countries [6], however, due to the issue of the Covid-19 pandemic the brand value as a country dropped 28 places, remaining in 65th place, thus exposing the great deficiencies that exist in our country, where the main factors were the irregularity in terms of inequality, quality medical care, and the lack of trust towards the state [7]. On the other hand, in the pharmaceutical sector, during the first quarter of 2021 registered a growth of S/937 million in revenues, which represents 27.5% [8].

In the case of the city of Huaraz, there are a total of 11 registered pharmacies, presenting a broad market of consumers who tend to choose pharmacies as their first option rather than an apothecary's shop. Therefore, the brand value generated for the consumer will depend a lot on the competitive advantage and success of the company, since it is an intangible asset that offers a type of guarantee to the customer, because it provides various benefits [9]. Thus, the value of the brand will be distinguished from one state to another, and for this purpose it can be grouped into five categories or dimensions. The first one obeys to the brand notoriety that the user has with respect to a specific brand compared to others that have similar characteristics. The second dimension is due to the perceived quality that the consumer believes a certain product and/or service has, which will be determined by various intrinsic and extrinsic attributes [10]. The third dimension is due to the brand association, whether it is the quality, attribute or outstanding characteristic that gives a particular benefit to the brand [11]. The fourth dimension is due to brand loyalty when the consumer finds a superior value compared to another brand [12]. At present, it is necessary for every company, and in this case the pharmaceutical sector, to know what are the main characteristics that lead to the intention to buy or choose a certain product and/or service of a specific brand, since the intention to buy is a way of making a decision when the user has gone through a process of reasoning that leads him to acquire a brand [13]. Therefore, knowing the main characteristics that lead to a purchase will allow pharmacies to create and offer the best marketing strategies in order to achieve a strong and emotional bond between the brand and its customers.

The arguments presented allow us to propose the general hypothesis of this research:

HG: There is a direct and significant relationship between brand equity and purchase intention in pharmacies.

On the other hand, because of the problems described above, this article aims to answer the question: What is the relationship between brand equity and purchase intention in pharmacies? Based on the aforementioned hypothesis. It also aims to identify the relationship between brand equity and purchase intention in pharmacies, for which a quantitative methodological approach is proposed by means of a questionnaire using the Likert scale. The instrument was applied to 384 pharmacy customers (149 Inkafarma, 107 Farmarecuay and 128 Mifarma). For the analysis of the results, various techniques were applied, such as the normality test, univariate tests, and others.

1.1 Brand Awareness

This refers to when a consumer remembers or recognizes a brand just by seeing the logo, hearing some characteristic or simply by highlighting a product in comparison with others of different brands [14]. Thus, brand awareness or recognition occurs through the relationship that a product has with the brand, which implies a continuous range that begins when the brand is not known, then there is a low brand recognition, then there is a medium recall and finally the brand is placed in first place in the consumer's mind [15].

Likewise, it is important to take into account certain strategies that will allow to increase brand awareness among customers, so the first strategy is to create a name and logo that stands out among its competitors; the second strategy is to forge a captivating story that helps to capture attention and therefore leads to position itself in the consumer's mind; the third strategy is to create and offer attractive and valuable content on the different platforms or social networks that the company has; the fourth strategy is related to the previous one, in which e-commerce should be used to help capture digital consumers; the fifth strategy is related to the customer itself, so it is important that the brand builds long-term relationships; and finally the sixth strategy is to offer a brand that generates value for consumers, leading to a positive relationship between the customer and the product of a brand [16]. The first hypothesis is thus proposed:

H1: There is a direct and significant relationship between brand awareness and purchase intention in pharmacies.

1.2 Perceived Quality

It is considered as the consumer's perception of the product and/or service of a specific brand, which is known as a subjective indicator [9, 17]. Likewise, perceived quality has five forms; related to the perception of customers, it offers an advantage that is focused on generating a superior collection, the brand quality can be significant for stakeholders, the perceived quality can be extended as long as new product categories are introduced in the market, and by extending it further it can find a higher probability of success compared to a weak brand [13]. The second hypothesis is developed for this work.

H2: There is a direct and significant relationship between perceived quality and purchase intention in pharmacies.

1.3 Brand Association

Brand association can be defined as that attribute, characteristic or outstanding quality of a brand that gives it a particular benefit [11], becoming the basis for the customer to decide to purchase a product or service and therefore to be loyal to the brand [18] since it will be remembered in the consumer's mind. Therefore, it is necessary to build more characteristics to the brand, according to the target market to which we want to address [15]. Likewise, the brand may present different types of associations, which will depend on how the consumer perceives it [19]. Among the main types of associations or attributes are the descriptive ones, which are based on the characteristics of a product or service, as well as the functional associations that are associated with the advantages or benefits offered by the brand when a customer decides to make a purchase; the emotional associations are focused on the emotion or feeling generated by the customer when consuming a product of a specific brand, while the projective associations are based on what a consumer thinks when seeing another person when consuming a certain recognized brand, and finally the personality associations refer to how the consumer personifies a brand [20]. Thus, the third hypothesis is presented.

H3: There is a direct and significant relationship between brand association and purchase intention in pharmacies.

1.4 Brand Loyalty

Loyalty or loyalty is considered as the preference for the brand, which is translated as the level of sympathy or favorable attitude that the customer has towards the brand, so that as the level of loyalty increases, competition is reduced, resulting in the repeated purchase for a long time, as long as the consumer's need is satisfied, therefore, achieving this satisfaction becomes loyalty, and this translates into higher future sales of the brand [9, 16].

According to [21], brand loyalty is the result of the interaction between behavioral loyalty and attitudinal loyalty; in the case of behavioral loyalty, it is based on a repeated behavior towards the purchase of a certain product or service of a specific brand, thanks to customer loyalty [22]; while attitudinal loyalty represents the psychological and emotional attitudes that a consumer has towards a brand, that is, thanks to the characteristics and comparisons of a brand with respect to the competition, the consumer has managed to identify and highlight which of them solves a problem or need, and this leads the consumer to present a strong connection, bond or preference towards a certain brand [23]. Thus, presenting the fourth hypothesis.

H4: There is a direct and significant relationship between brand loyalty and purchase intention in pharmacies.

Based on the hypotheses proposed, the following Fig. 1 is developed on the basis of the proposed research model.

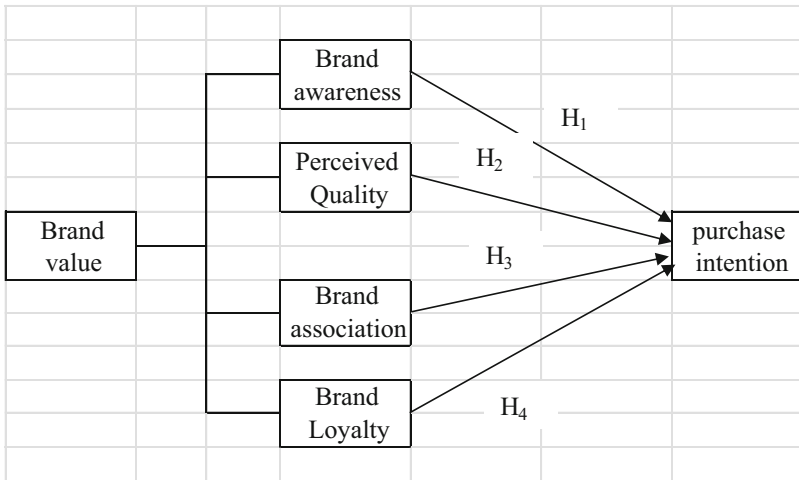


Fig. 1. Research model. Source: Own elaboration

1.5 Purchase Intention

It is defined as that spontaneous purchase process subject to certain emotional and behavioral stimuli, which finally leads to the consumption of a specific product or service [24]. It is considered as a measure of the customer's attitude or preference that leads him to make a specific purchase, however, to reach this last process of acquiring a product or service the customer will have to go through certain external and internal factors that lead him to make an evaluation of the product or service he has in mind to buy, and according to the previous analysis can limit or lead him to make the final purchase [10, 18].

According to [25], they consider that the consumer's intention is a measure of the customer's attitude or preference that will lead him to make a specific purchase, however, to reach this last process of acquiring a product or service the customer will have to go through certain factors (external and internal) that lead him to make an evaluation of the product and/or service he has in mind to buy. Among the main internal factors are perception, personality, lifestyle, while the external factors are culture, family and leading groups, therefore, these are the factors or events that can alter and affect the purchase intention.

Therefore, through the purchase intentions of a consumer, the company increases its profits thanks to the investments it makes in marketing activities, and thanks to the activities used in marketing management, it helps the product and/or service provided by a company to be more successful in the market, i.e. against its main competitors [26].

Thus, before launching a certain product and/or service to the market, the company must make sure to create brand awareness in the consumer, which translates into how the user or consumer generates associations towards a specific brand.

2 Methodology

The present study was observational and non-experimental, since there was no intervention by the researcher based on the study variables. It was also correlational because it sought to relate the variables brand equity and purchase intention through hypothesis testing. It was trans-sectional because of time, since for the research the data were collected taking into account a single period of time.

Likewise, for the analysis and clarification of the secondary information, identification of the dimensions and variables to be measured, and selection and adaptation of the instruments for the collection of primary information; it was decided to use the models [26, 27] for the first variable brand value with its respective four dimensions (brand awareness, perceived quality, brand association and brand loyalty); while for the purchase intention variable the model [28] was used, for which the 4-question questionnaire [29] was acquired. Since the questionnaire for both variables (brand equity and purchase intention) was self-administered, it was necessary to adapt it to the pharmaceutical industry.

Likewise, the survey technique was applied through the use of online and face-to-face questionnaires, which consisted of a total of 22 questions divided into three parts: the first part included demographic questions, the second based on brand value, and the third on purchase intention, including the initial instructions. In addition, the measurement of the questions was established using a five-level Likert scale. For the collection of primary information, a population of 180,000 clients of the three main pharmacies was established; the first two are leading brands such as Inkafarma and Mifarma, and the third being one of the first in the city of Huaraz, which is Farmarecuay. A sample of 384 clients.

The reliability measurement was carried out through Cronbach's alpha, showing that the questionnaire is acceptable, since for the brand value variable the result was 0.899, while for the purchase intention it was 0.855; concluding for both that the instrument has a high reliability.

3 Results

Once the activities described in the methodology chapter have been carried out, the following are the relevant results from the information gathered through the surveys, which contribute to the achievement of the objectives proposed in this research.

First, regarding the description of the demographic variables of the sample, 51.3% of the respondents are female, 41.7% are university graduates, 45.3% are employees, and 60.7% live in the district of Huaraz, the average age of the clients of the pharmacies in the city of Huaraz is approximately 35 years, with clients between 18 and 68 years of age having been surveyed.

3.1 Descriptive Results

It is observed that 39.6% of the surveyed clients present medium levels of brand equity in relation to the pharmacies, while 29.4% present high levels, which leads to the conclusion that the brand equity in the pharmacies is medium.

In the Table 1, it was determined that 38.3% of the surveyed customers show low levels of brand awareness, while 23.4% show high levels. For the next dimension, it was determined that 45.8% of the clients show medium levels of perceived quality, while 24.7% show high levels. As for the third dimension, 50.5% of the clients surveyed showed medium levels of brand association, while 16.4% showed high levels. As for the fourth dimension, it was determined that 46.6% of the customers surveyed had medium levels of brand loyalty, while 15.9% had high levels. Therefore, that the first dimension of brand awareness of pharmacies is low, while the other three dimensions of perceived quality, brand association and brand loyalty of customers to pharmacies are medium.

Table 1. Levels of the dimensions of brand equity

Levels	Brand awareness	Perceived quality	Brand association	Brand loyalty
Low	38.3	29.4	33.1	37.5
Medium	38.3	45.8	50.5	46.6
High	23.4	24.7	16.4	15.9
Total	100	100	100	100

For Table 2, it was observed that 37.5% of the surveyed pharmacy customers present low levels, while 28.1% present high levels of purchase intention.

Table 2. Levels of purchase intention

Levels	Frequency	Percentage
Low	144	37.5
Medium	132	34.4
High	108	28.1
Total	384	100.0

3.2 Hypothesis

Table 3 shows a direct correlation between the research variables brand equity and purchase intention, with a degree of correspondence of 0.634, that is, it symbolizes that there is a moderate positive correspondence with a significance value of less than 0.05, so the null hypothesis is rejected and the alternative is accepted. In conclusion, brand equity is related to customers' purchase intention in pharmacies. Therefore, the general research hypothesis is accepted, since the variables present a direct and significant relationship.

Table 3. Correlation of brand equity and purchase intention

	Brand value	Purchase Intention			
Rho de Spearman	Brand value	Correlation coefficient	1.000	,634**	
		Sig. (bilateral)		0.000	
		N	384	384	
	Purchase intention	Correlation coefficient	,634**	1.000	
		Sig. (bilateral)	0.000		
		N	384	384	

** The correlation is significant at the 0.01 level (bilateral).

4 Contributions

According to the study, it was determined that there is a moderate positive relationship of 0.634 between brand equity and purchase intention in the city’s pharmacies; therefore, there is coincidence with the work of [22], who in his research work, brand equity presents a relationship with purchase intention of 0.399 showing a low positive correspondence, although the study variables do not belong to the same research sector (pharmaceutical), therefore, the correlation is a little low since it focused on the consumption of its customers for the products sold in its main store in Bode Peru, instead for pharmacies it worked with customers of the three major pharmacies recognized in the city. Moving on to the first specific hypothesis, a correspondence between brand awareness and purchase intention of 0.431 was observed, showing that it has a moderate positive correlation, since unlike the study of [23] it reflects a low similarity coefficient of 0.099, since it is not offering a positive communication according to the new products and promotions. In the case of pharmacies, the correlation coefficient was higher because the products offered by pharmacies, such as medicines, beauty, hygiene, etc., are usually recognized according to the brand name, are usually recognized on the basis of the pharmacy brand and not on the products they offer. This is also consistent with the levels where it was determined that of the 384 respondents, 38.3% reflect a low level of brand awareness, therefore, pharmacies do not apply appropriate strategies where customers associate or link the product with the company’s brand. For the second hypothesis, a moderate positive correspondence was observed between perceived quality and purchase intention with a coefficient of 0.538. This is in agreement with the research of [30, 31], where the correlation coefficient is 0.451, which is considered a moderate positive correspondence, since customers value the quality and guarantee of the products offered by Bode Peru, while in pharmacies, customers value product quality very highly. Likewise, it can be seen in the levels where it was determined that of the 384 respondents, 45.8% reflect a medium level, since pharmacies offer various lines of products that are focused on health, and customers tend to consume them on a daily basis. For the third hypothesis, a moderate positive correspondence of 0.471 was observed between brand association and purchase intention, which does not coincide with the study of [24], where the correspondence coefficient is 0.165 and is considered

a very low positive correspondence; in comparison with the research [32], which also obtained a low positive correlation value of 0.265, since the products offered in one of the stores of Bode Peru do not offer variety in their products, therefore they do not end up covering the needs of their customers; while in the pharmacies it can be seen in the levels that of the 384 respondents 50.5% reflect a medium level in the brand association, since the attributes that relate to the brand value are so high. Finally, the fourth hypothesis obtained a moderate positive correspondence between loyalty with purchase intention in pharmacies, where the similarity coefficient was 0.634, which agrees with the research of [19, 33], where a correlation of 0.598 since customer service plays an important role since, they need personalized advice and specifications of their products; while in Pharmacies customers are only considered loyal to recognized products, as long as the prices are cheaper and they provide discounts on certain product line, which generates an added value of the brand and this leads to more loyal customers.

5 Conclusion

This research was conducted to examine the relationship between brand equity and consumer purchase intentions. Therefore, it has been concluded that the independent variables of the study such as brand awareness, perceived quality, brand association and brand loyalty have a sig value of less than 0.05, which symbolizes a relationship with a more significant impact on the dependent variable, i.e. on consumer purchase intentions. The coefficient of brand awareness is 0.431, which is why brand awareness should be strengthened through the application of better communication strategies on the different product lines, promotions and/or discounts, which will help increase purchase intention in other pharmacies and not only in those leading brands in our city. The coefficient of perceived quality is 0.538, which suggests that when perceived quality increases, an increase of 0.538 can be predicted in the increase of purchase intention with other variables remaining constant, which is why pharmacies should link and integrate differentiating characteristics and advantages in their products and/or services, which will allow customers' perceived quality to be higher. The coefficient of brand association is 0.471, so pharmacies should interact through social networks, website and in the same store, making known the different products they offer and the benefits obtained by consuming them, which generates that the customer associates' greater qualities of the brand. The brand loyalty coefficient is 0.638, In addition, according to the results obtained, brand loyalty is the dimension that has the greatest impact in relation to the dependent variable, consumer purchase intention, so it is important to offer an after-sales service through online surveys, in order to know customer satisfaction and the products or product line that they usually buy, which will help to increase and strengthen brand loyalty by offering incentives in the products they mostly consume.

Indeed, future research on purchase intention can be conducted with other variables, which can be the achievement on consumer purchase intention.

As for the main limitations of the study, firstly, since the variables are little known, it is difficult to obtain background information at the local level, especially that they are aimed at the pharmaceutical sector. Secondly, based on the literature on brand equity, several variables were found that have not been considered in this study, since it was

tried to focus on those best known and used according to the antecedents that were applied for the discussion, likewise regarding the purchase intention variable, there was little information in terms of literature, making it difficult to obtain its main dimensions. Therefore, based on what was stated in the research, it is important to take it with moderation.

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Reflections of Social Support on Twitter: The Case of the Soma Mine Disaster in Turkey

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Abstract. Tweets posted during the Soma mine disaster that took place in Turkey provide a better understanding of the potential that social networks have for social support. The social media analytics framework and the text categorization methodology using CovNets were used to analyze 6.3 million tweets containing the keyword “soma” posted between 13 May 2014 and 23 March 2015 in Turkish. According to the findings, people used Twitter more after hearing about the terrible and tragic event. In reaction to the demand for a public day of mourning, Twitter was used to express grief and outrage. Twitter usage has expanded in unison with the involvement of charity and assistance organizations. Regardless, none of the support efforts posted on Twitter garnered widespread public participation. The results, on the other hand, showed that deep learning could accurately predict if a tweet would garner a substantial number of retweets. The findings could be beneficial for people interested in how social support organizations and policymakers use Twitter to keep the public informed during significant disasters.

Keywords: Soma mine disaster · Twitter · Tweet · Social media analysis · Social support · Deep learning · Big data

1 Introduction

On May 13, 2014, a serious accident occurred at a coal mine in Turkey’s Soma district. The Soma mine disaster, widely regarded as one of the worst industrial disasters in the region in the last decade, claimed the lives of 301 mine workers. [5] When the bad news broke, the death toll was unknown to the public, but prayers for the rescue of all trapped miners were overwhelming. This was followed almost minute by minute by news of every saved life, or the majority of them; unfortunately, the casualties were brought to the surface from underground. As public interest in the status of rescue operations grew, social media, particularly Twitter, emerged as the primary source of information dissemination. Twitter users engaged in a variety of activities. Some have organized collaborative prayer sessions to help affected families emotionally and socially. Others were busy gathering and delivering humanitarian aid funds and materials to Soma. Regardless of their participation in such events, the majority of Twitter users were interested in conveying real-time information about Soma rescue operations to the general

public. The rising death toll had drawn even more users to Twitter, while public mourning had become more intense. Twitter, a social media platform initially developed for entertainment and socializing, proved to offer opportunities for social support during a disaster. Thus, we focus on the Soma mine disaster in this study with the research objective to better understand the various uses of Twitter and the possibility of predicting whether a tweet will receive a large number of retweets in a specific domain. We use a type of deep learning artificial neural network, Convolutional Neural Networks (CovNets), which are widely used in image [14] and text [13] classification for precise prediction using only the text fields of tweets. The study and its findings offer significant contributions to the multi-disciplinary fields of social networks, information technology adaptation, human-computer interaction, communication, and policy-making by revealing virtual behavioral mechanisms involved in the disaster context.

The following is how this paper is structured: Sect. 2 summarizes the most important studies published in the literature. Section 3 contains an explanation of the methodology used. The analysis and results are then presented in Sect. 4. Finally, Sect. 5 summarizes and concludes our research.

2 Literature Review

Several studies in the literature indicate that social media could be used to enhance disaster operations. [9] developed a framework to aid in the design and implementation of disaster-related social media tools, as well as to assist scientists in studying how social media affects disasters. [2] proposed a model for detecting major events and alerting via ‘Twitter’ in order to comprehend the occurrence of events in real-time. Their system identifies significant events with national implications, such as disasters, terror attacks, and social events like protests, sends alerts shortly after the event occurs, and allows for proper preparation. [12] investigated the various functions of social media as interpersonal communications channels for information sharing and gathering, as well as channels for local governments, organizations, and media. They recommend creating an effective communication network through social media to prepare for disasters.

Twitter, as a social media platform, provides a potential communication channel for information sharing and gathering that governments and organizations can use actively during crises. [8] empirically demonstrated that Twitter is insignificant for government crisis communication because most tweets contain no new and relevant information for the government, and many citizen tweets obscure the tweets posted by the government. As a result, issues raised by citizens on Twitter were effectively addressed by other citizens, and accurate information was quickly disseminated via social media. Furthermore, users’ perceptions of information consumed through social media may be influenced by their general trust in the medium. Government and public safety organizations should be aware of the effect the medium of information distribution may have as a practical implication of risk and crisis communications. [15] investigated the role of social media as an information source during a crisis. They concentrated on trust, which is critical in high-risk situations. They proposed that general social media use could predict trust in social media during crises. In addition to trust, thought leaders influence information dissemination and sharing through social media. [6] created a content analysis tool

for online social media by piecing together social network graphs to identify thought leaders who emerge during crisis events. Their approach is concerned with assessing thought leadership in large social networks. Although social media is an excellent platform for sharing and disseminating information during disasters and crises, it has some limitations. [4] stated that using social media to disseminate disaster information has limitations, particularly for older adults, because many do not use social media or technology and thus are unable to access information through these channels. The extra stress of trying to interpret disaster information in a chaotic time reduces credibility for older adults due to the large and conflicting volume of information available through social media. Furthermore, multiple sources of warning information may be problematic during a disaster because residents may become confused, and information sent via social media may be unreliable and exaggerated [1].

In addition to sharing and disseminating information, people use Twitter to express social support, particularly during disasters and crises. [3] conducted a content analysis on tweets to determine the presence and magnitude of social support messages conveyed by Twitter users following the death of a non-celebrity. In general, the findings provided empirical support and show that people use Twitter as a platform to send informational and emotional support messages to convey social support. Informational support was mostly expressed through posting or sharing pictures and relevant news articles, whereas emotional support was mostly expressed through praise, sympathy, and prayers. Furthermore, Twitter can be used to assist in social marketing activities such as fundraising and social support campaigns. [10] conducted a content analysis to demonstrate how sports help public and non-profit organizations in disaster relief efforts by providing monetary and in-kind donations, spreading attention to the recovery effort beyond regional boundaries, and facilitating psychological recovery for affected individuals as emotional support. They stated that sport could play an important role in community recovery efforts, and their findings can serve as a framework for future research into this role of sport. [16] concentrated on creating more effective campaigns immediately following a disaster. They discovered various types of advertisements. They discovered that most commonly used advertisements aimed at improving the company's image or providing information do not correlate with public perception. As a result, despite being the most commonly used type, "image" ads were poorly perceived by the general public. However, "participation" with the less commonly used type received the highest rating, followed by "fundraising promotion" and "informative" ads. As a result, they revealed that campaigns should be more aligned with public expectations and evaluations.

3 Methodology

Studies involving Twitter big data analysis must frequently rely on one of two available sources [11], either purchased from a data source or streamed data collected via a Twitter API. In our research, we chose the latter. Between 13 May 2014 and 23 March 2015, a Twitter Stream API was used to collect real-time publicly available Turkish tweets containing the keyword "soma." While the tragic incident marked the start of data collection, the end date was determined solely by server maintenance requirements coupled

with visual analysis of stabilized Tweet volume. As a result, 6,329,038 tweets that were publicly available were collected. Our methodology is based on a social media analytics framework [7], and it consists of three sequential processes: capturing, understanding, and presenting. This was followed by the text categorization methodology, CovNets, which [13] presented the overall architecture.

4 Analysis and Results

Tweet volume is regarded as a reliable indicator of Tweeting activity. As a result, a tweet volume analysis with major local peak points and related real-life events was performed. Figure 1 depicts the daily volume of all collected tweets over a ten-month period. Table 1 lists major events that have an impact on tweet volumes. As a result, the first peak point was recorded on 15 May 2014, two days after the Soma Mine disaster, when news broke of an increasing death toll of over 250 people. Following that, there was a downward trend in daily tweet volume, with some local peaks. The second tweet volume peak is observed on Father’s Day, June 15, 2014, due to campaigns emphasizing slogans such as “remember those kids who lost their Dads, celebrate your Father’s Day.” Consecutive peaks occurred on August 8, 2014, and August 25, 2014, when a Charity Soccer Match was held and the Turkish Football Federation announced the establishment of a Soma Soccer School, respectively.

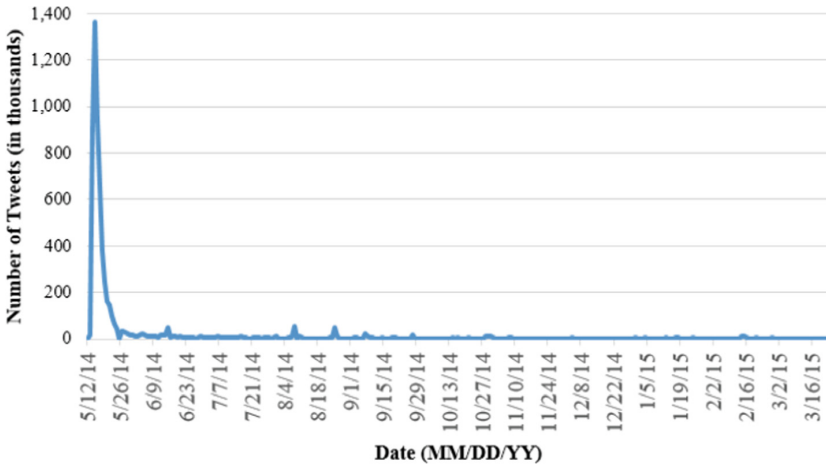


Fig. 1. Volume of Tweets (12 May 2014 – 16 March 2015)

Despite the shocking impact of more than 300 miners dying in a single incident, Soma-related tweeting behavior lacked the expected sustained activity. Except for the Charity Soccer Match, the remaining days in our analysis have not exceeded 50K daily tweets, despite the fact that 1,4M daily tweets were posted on the second day of the disaster. As a result, other major events had only induced 10–50K daily tweets, which was far too low in comparison to the initial peak. During the first few days, the high

volume of Tweets observed abruptly dropped to shallow levels. The drop was observed following the Tweets of some politically prominent users with political agendas. Our analysis does not include any causality to refer to; however, the loss of interest in Twitter use could be attributed to sensitivities associated with mixing political agenda with mourning and sorrow.

Table 1. Major events affecting tweet volumes

	Date (MM/DD/YY)	Events simultaneously taking place	Volume of Tweets
1	5/15/14	Death toll rising 250+ Street protests organized	1,364,403
2	6/15/14	Father's Day	48,231
3	8/8/14	Charity Soccer Match	53,951
4	8/25/14	Turkish Football Federation Soma Soccer School groundbreaking ceremony, Fenerbahçe - Galatasaray Super Cup Match	47,670
	9/7/14	Güven Özdemir's stand-up show "Am I Crazy?" was staged at Batıkent Theater Hall for the benefit of Soma	19,661
5	9/27/14	Devastating News: Preventive fire masks were not distributed, could have saved 150 lives	14,607
6	10/28/14	'Ermenek' mine accident - Death toll 18	13,249
7	2/15/15	The aftermath of the triple tournament income for Soma benefit and Galatasaray former football player Drogba's allegedly donated 1 million TL are unknown	11,589

An increase in daily tweet volume could be caused by the same Twitter users posting more tweets or by new subscribers tweeting on a specific topic. Figure 2 shows the daily number of Twitter users in the case of Soma. The daily number of Twitter users, like the volume of tweets, peaked on the second day of the incident, followed by Father's Day, the Charity Soccer Match, and the Turkish Football Federation's announcement of the Soma Soccer School.

An increase in daily tweet volume could be caused by the same Twitter users tweeting more frequently or by new subscribers tweeting on a specific topic. The daily number of Twitter users was examined in the case of Soma, as shown in Fig. 2. The daily number of Twitter users peaked on the second day of the incident, as did the volume of tweets, and was followed by Father's Day, the Charity Soccer Match, and the Turkish Football Federation announcing its Soma Soccer School (Fig. 3).

Finally, we used 30K tweets with the most and least number of retweets, labeled as 'high' and 'low,' respectively, to predict the likelihood of retweeting. The data was then randomly divided into training and test sets with sizes of 25K and 5K, respectively.

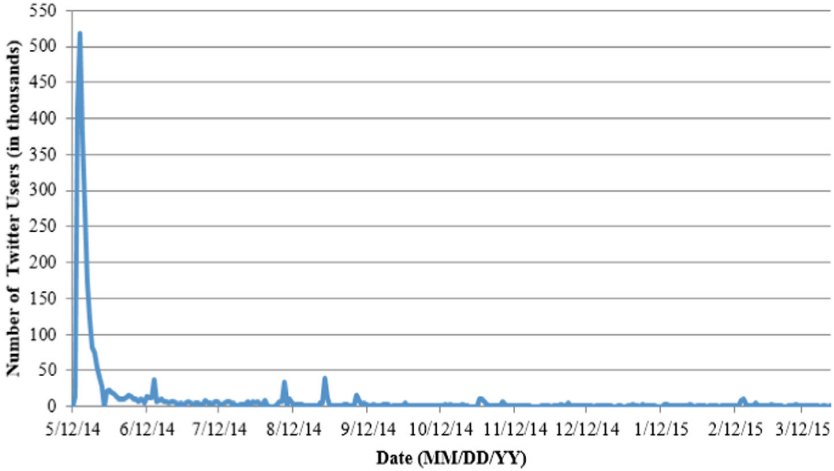


Fig. 2. Daily number of Twitter users (12 May 2014–16 March 2015)

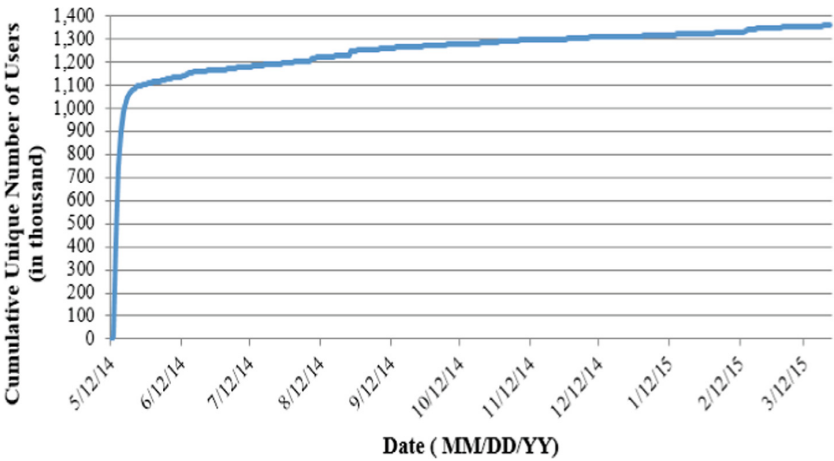


Fig. 3. Trend of new subscribers' involvement in tweeting

TensorFlow,¹ an open-source software library for deep learning networks, was then used to create the CovNets model shown in Fig. 4.

The first step in our CovNets model was to convert tweets into a sequence of word embeddings. By setting the maximum sequence length to 25, each tweet was specified to contain 25-word embedding vectors. Three convolution operations were used, with filter sizes 3, 4, and 5. ReLUs were chosen as a nonlinear function, and an L2 regularizer was used. For the pooling operation, the Max pooling method was chosen, and the dropout operator parameter was set to 0.5, resulting in half of the units being dropped between each layer. Then, using an Adam optimizer with a learning rate of 0.001 and a batch size

¹ <https://www.tensorflow.org>.

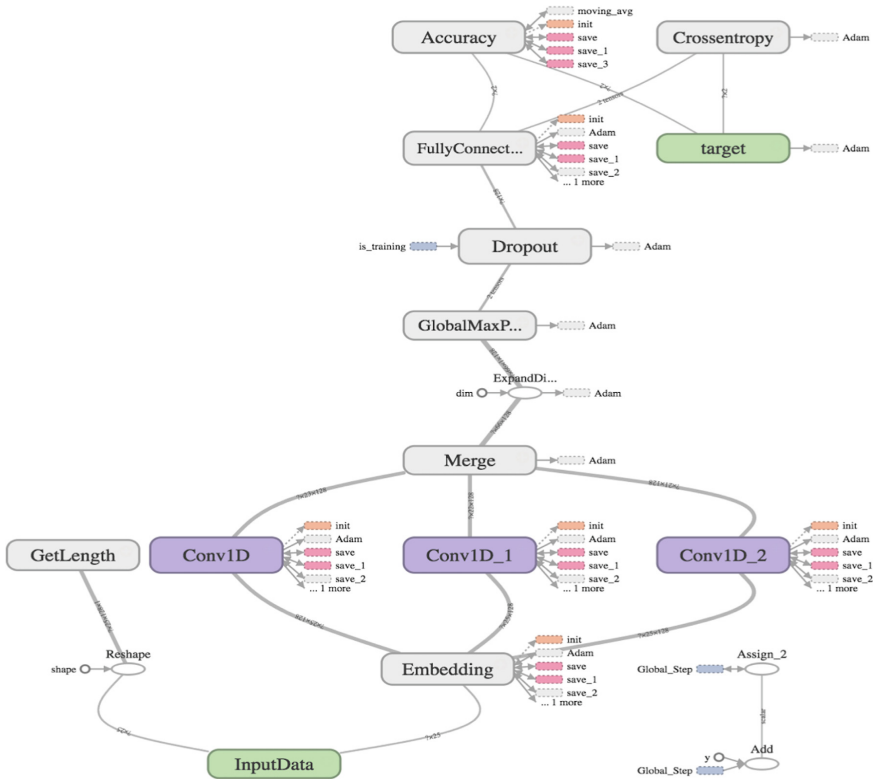


Fig. 4. The CovNets model architecture

of 32, a fully connected layer was obtained. We tackled a binary classification problem in which two outputs of ‘high’ and ‘low’ were predicted.

TensorBoard,² a visualization tool, was used to show the accuracy results for training and test data, as shown in Figs. 5 and 6. As a result, the learning model learns the training data with greater than 95% accuracy (Fig. 5). The test data results, however, showed oscillations at the start, which resumed after the 16Kth iteration, where an accuracy of 73 percent was achieved (Fig. 6).

² https://www.tensorflow.org/get_started/summaries_and_tensorboard.

- Accuracy/

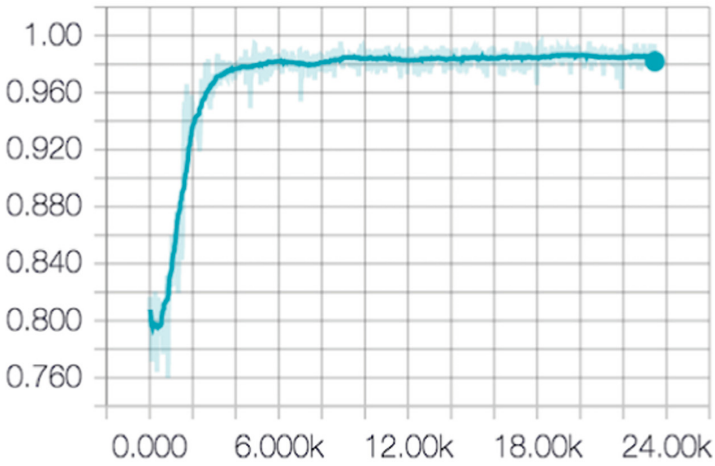


Fig. 5. Accuracy of training data

- Accuracy/Validation

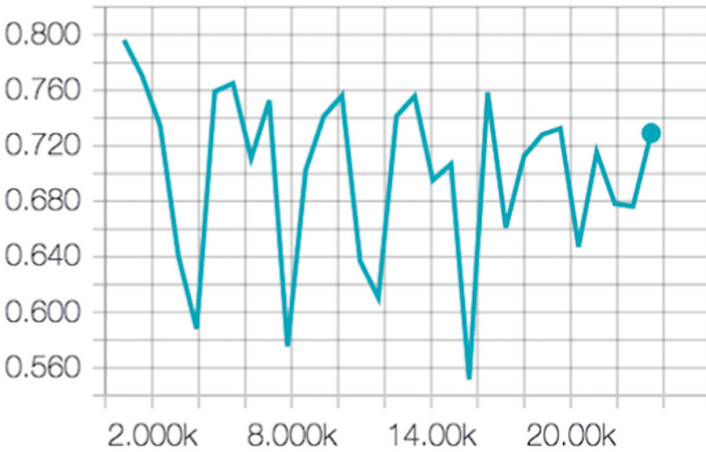


Fig. 6. Accuracy of test data

5 Conclusion

Our analysis revealed that the shocking exposure to the severely tragic incident has increased Twitter use dramatically. This was particularly evident in our observation when news broke about the death toll increasing and rising beyond 250 miners leading to about 1.4M tweets on 15 May 2014. Public mourning was called upon, and Twitter served to express sadness and frustration.

Twitter use also increased upon support and charity organizations taking place. The increase in Tweeting behavior was evident in organizations initiated by soccer clubs and players, whether a summer school, a charity match or a super cup match. All ticket sales revenue was directed to affected families, and further donations were collected during these sports events. Similarly, a stand-up show was staged for charity purposes. An increase in Tweet volume reflected all these support activities. Emotional support from the public surfaced on Twitter, particularly around Father's Day. Users have posted messages to reflect on their emotional support towards Soma kids who lost their parents during the disaster. Despite all valuable efforts, none of the support activities conveyed on Twitter captured broader public participation in Tweeting. Daily Tweet volume on corresponding days of social support activities hardly exceeded 50 000, reaching only 4% of the global peak in our dataset. Social support intentions were not only weak in capturing high Tweet volumes, but the mini-peaks they were able to raise had faded out very quickly, too.

Our findings suggest that deep learning can be used to accurately predict the likelihood of high retweeting, allowing policymakers to use Twitter to inform the public during major disasters.

Various disaster cases need to be examined to understand better the nature of social media use in various settings. Our findings are limited only to a mine disaster; therefore, certain limitations exist in applying our conclusions to different other disasters. Moreover, deep learning could also be employed to analyze social media content with visuals to understand better such content retweeting.







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A Study to Assess the Impact on Narcissist, Necrophilia, and Sadistic Personality Disorder on Youth's Purchase Decision with Respect to Cosmetics Products

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Abstract. The cosmetics products industry is growing rapidly across the world, especially in India. The majority of the people who buy these cosmetics products are the youth as they want to look more presentable and beautiful. As the number of women workforce has increased over the years, the sale of cosmetics has also increased as women want to be presentable during work, as it makes them feel confident. But it is not only women who use cosmetics, but it is also men who are consuming cosmetics products almost equally. The study is performed with an objective to assess the impact of gender with respect to their Perception Towards Cosmetic Advertisements, Narcissist Personality Disorder, Sadistic Personality Disorder, and Intention to Purchase Cosmetics, to assess the impact Perception of Cosmetics Advertisements, Narcissists, Necrophilia, and Sadistic Personality Disorder on Intention to Purchase Cosmetics and to assess the relationship between Perception of Cosmetics Advertisements, Narcissist, Necrophilia, and Sadistic Personality Disorder with the Intention to Purchase Cosmetics.

Keywords: Narcissist · Necrophilia and Sadistic · Personality · Disorder · Youth · Purchase · Cosmetic · Products

1 Introduction

Looking beautiful is not a new concept, when we go back to history we get concrete proofs of the beautification of women, as women are obsessed with looking beautiful. This has actually led to the creation of various products which can be used by women to beautify themselves. Initially, various cosmetics were created with the help of herbs, which helped women to look young and charming. Various forms of herbs that were easily available in India were initially used and became popular across the globe. In recent years cosmetics made from herbs have become very popular with the name 'herbal cosmetics' and have grown in demand. Not only in India, but these products are very much popular across the globe and are also widely accepted.

The cosmetics industry in India has been very popular and accepted in the herbal products category. Various Indian brands have also made it big in the domestic as well as the global market. Some of the companies which are made it big are Himalaya, Khadi Herbal, Lotus Herbal, etc. There are many smaller brands that have a significant presence in the local market. They do have various kinds of cosmetics ranging from hair care, skin care, oral care, fragrances, colors, etc.

The increase in consciousness to look beautiful and handsome among women and men respectively has contributed to the growth of the cosmetics industry in India, this type of significant growth has been witnessed in the last ten years. The cosmetics industry has proved to be one of the biggest emerging markets across the world. Various new products have been introduced into the industry every now and then, and it has just added fuel to the growth of the industry, and thus, the future of the industry looks very bright in India.

A reason which has contributed to the growth of cosmetics is the increase in consciousness about beauty, grooming, and appearance. Today cosmetics has grown to such an extent that there are more than three thousand and three hundred cosmetics manufacturing companies only in America that are doing pretty good business.

After the literature review, a gap was found. There is no research happened to assess and understand the impact on human personality after seeing cosmetics advertisements. There is no study conducted to assess the personality discovered developed by the viewers, especially the youth who watch the cosmetics advertisements. Thus, this study would help in contributing significantly to the field of advertising, consumer behaviour and human psychology.

The entire paper is broken down into five parts. The first part is the introduction, the second part is the literature review. The third part discusses the research methodology of the paper which covers various aspects such as objectives, sample size, sample design, reliability, and validity test. The fourth part of the paper is analysis and interpretation, followed by discussion and conclusion as the fifth and the sixth path respectively.

2 Literature Review

The ultimate objective of advertisements is to gain sales and to keep selling expenses low on the other end. The respective company advertising cosmetics ensures that the advertisements show positive results, even when the message is not delivered personally. As advertisements are carried on various means such as the newspaper, magazines, hoardings, radio, television, social media, or any other mass media that exists. The respective advertising company must pay the media companies for their space in print media and for the time in audio and video media [1].

Through advertisements, people develop perception and this perception will have an impact on one's behavior and actions. An individual tends to develop a number of positive and negative feelings and emotions after seeing the advertisement. This impact helps us to assess how powerful the message was. This is a very significant aspect, as companies and ad agencies will have to create an impact in a span of just 30 s [2].

Not much research has been done in order to understand the direct impact of cosmetics advertisements on consumers. The majority of the previous studies have only discussed and focused on the impact and implications of the cosmetics industry. This is also because boys and girls at a very young age are thought to use cosmetics to that themselves look more attractive. Different amounts are applied based on the need and requirement and it works as a self-esteem and self-image booster for a temporary period. One of the most important benefits of cosmetics is that it is a quick and easy way to solve any kind of beauty problem. It is basically a shortcut to looking beautiful. Women use cosmetics at different levels based on how and where they spend the day [3].

The primary objective of the advertisement is to create a sense of liking, and understanding of the products or service. The most important aspect from the point of view of advertising is the perception of advertisements. The perception which people develop after viewing the advertisement has an impact on their purchase intention [4].

The more the television is aired on television, the higher will be the demand for the respective cosmetics. When the viewers see the advertisement more and more, they develop a sense of liking and attachment towards the respective cosmetics. Advertisements that are aired on television have a positive impact on women, as it directly influences their choice to purchase cosmetics. When it comes to cosmetics, consumers always prefer to purchase branded products because they feel that branded products will be of good quality, as good quality ingredients would be used, and it would not have any negative impact on their body and skin. The cosmetics companies and advertising agencies should ensure that complete information about the cosmetics is provided to them so that it would facilitate them in better decision making [5].

Men purchase cosmetics on a regular basis and they purchase cosmetics in order to satisfy their self-image, lifestyle, social belief, and self-esteem. Men go shopping for cosmetics products as it would enhance their lifestyle and would add to their confidence and self-image. Later the self-image is also linked to the social belief and self-esteem of the individual. Thus, there exists a similarity between men's and women's behavior when it comes to the purchase and use of cosmetics products [6].

3 Research Methodology

3.1 Objectives

1. To assess the impact of gender with respect to their Perception Towards Cosmetic Advertisements, Narcissist Personality Disorder, Sadistic Personality Disorder, and Intention to Purchase Cosmetics.
2. To assess the impact of Perception of Cosmetics Advertisements, Narcissists, Necrophilia, and Sadistic Personality Disorder on Intention to Purchase Cosmetics.
3. To assess the relationship between Perception of Cosmetics Advertisements, Narcissist, Necrophilia, and Sadistic Personality Disorder with the Intention to Purchase Cosmetics.

3.2 Population

Bangalore is a city with a fast-growing population and also has a huge number of people who are purchasing and consuming cosmetics. Thus, the population is taken from Bangalore city.

3.3 Frame

Youth are defined as people who are in the age group of 15 to 29 years. More than 24 lakh people in Bangalore city fall into this age group.

3.4 Method

The sample is collected from different parts of Bangalore city. A simple random sampling technique was employed to conduct this study.

3.5 Sample Size

The youth population is more than 24 lakhs in Bangalore city. The questionnaire was given to 560 respondents from across Bengaluru. As per BBMP, Bengaluru is divided into 10 zones, and data from 56 respondents was collected from each zone. A total of 560 questionnaires were distributed in 10 zones in Bengaluru. 27 questionnaires were rejected due to over-writing and 21 questionnaires were rejected due to incomplete filling. Thus, the final sample size came up to 512.

3.6 Data Collection Design

Primary data was collected with the help of a structured questionnaire. A four-point rating scale was employed in the questionnaire. Secondary data such as newspapers, magazines, journals, and online articles were also referenced for the research.

3.7 Statistical Tools

The collected data were subjected to a t-Test, Regression, and Correlation. The data analysis was carried out using SPSS.

3.8 Reliability

A pilot Study is a small-scale preliminary study conducted in order to evaluate the feasibility, time, cost, adverse events, and affect size (statistical variability) in an attempt to predict an appropriate sample size and improve upon the study design prior to performance of a full-scale research project. Pilot studies, therefore, may not be appropriate for case studies.

The Pilot Study was conducted to test the tool developed and to standardize the deceptive rating scale. The tools presented were administered on 50 respondents who were similar to the final sample of the study.

Reliability analysis was used to conduct the pilot study. It is a measure to check the internal consistency of an instrument constructed with multiple-item scales. Reliability analysis is undertaken by estimating a ‘true’ score and comparing it with the observed score. It is used to examine whether the instrument measures the same thing irrespective of who administers the instrument and how.

The analysis focuses on the internal consistency of the instruments. Therefore, we need to use Cronbach’s Alpha. The null and alternative hypotheses for Cronbach’s Alpha are:

H_0 : The test is not reliable, that is, the observed score is not reliable to the true score.

H_1 : The test is reliable, that is, the observed score is related to the true score.

3.9 Reliability Statistics

The Case Processing Summary table shows that out of 50 respondents, all 50 respondents are included in the analysis. The value of Cronbach’s Alpha is 0.783 (Table 3.1) and the number of items (questions) is 50. Since the value of Alpha is higher than the accepted (.70), we reject the null hypothesis and we say that the instrument is reliable and can be used with other statistical procedures for future investigation.

Cronbach’s alpha	Number of items
0.783	50

Source: Primary Data.

On the basis of the result of the pilot study, minor alternations and changes were made in the questionnaire wherever necessary and the tools which should be employed for testing were finalized. This was followed by developing a pre-coded questionnaire.

3.10 Validity

The validity of the research instrument was ascertained using Confirmatory Factor Analysis (CFA) and the analysis is presented in the below Fig. 1 and Table 1.

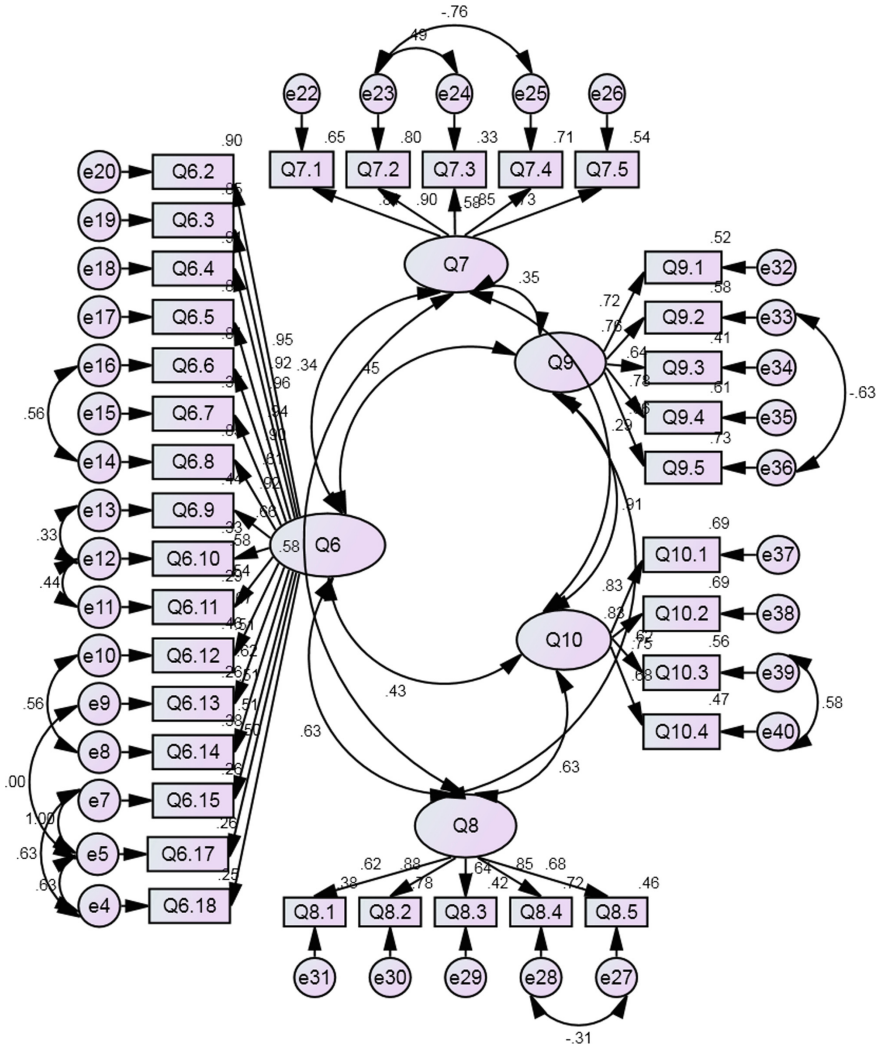


Fig. 1. Confirmatory factor analysis graphical diagram

It can be seen from the above table that all paths were found to be significant at $p < 0.001$. The fit indices for the measurement model are summarised in the Table 2 below.

Table 1. CFA path analysis

Path			Unstandardized coefficients	Standardized coefficients	T	p
Q6.14	<---	Q6	.457	.619	15.422	***
Q6.13	<---	Q6	.397	.509	12.198	***
Q6.12	<---	Q6	.491	.675	17.207	***
Q6.11	<---	Q6	.399	.536	12.966	***
Q6.10	<---	Q6	.467	.578	14.171	***
Q6.9	<---	Q6	.499	.661	16.764	***
Q7.3	<---	Q7	.525	.576	13.350	***
Q8.3	<---	Q8	.478	.644	15.805	***
Q9.2	<---	Q9	.664	.759	19.308	***
Q9.3	<---	Q9	.543	.639	15.811	***
Q9.4	<---	Q9	.642	.783	20.803	***
Q10.2	<---	Q10	.617	.832	22.387	***
Q10.3	<---	Q10	.630	.746	19.105	***
Q6.18	<---	Q6	.388	.495	11.838	***
Q6.17	<---	Q6	.395	.522	12.574	***
Q6.15	<---	Q6	.396	.510	12.225	***
Q6.2	<---	Q6	.766	.948	28.762	***
Q6.4	<---	Q6	.773	.956	29.263	***
Q6.3	<---	Q6	.769	.923	27.458	***
Q6.5	<---	Q6	.748	.937	28.186	***
Q6.6	<---	Q6	.739	.903	26.382	***
Q6.7	<---	Q6	.463	.608	15.070	***
Q6.8	<---	Q6	.738	.919	27.242	***
Q7.4	<---	Q7	.716	.845	22.099	***
Q7.5	<---	Q7	.587	.735	18.963	***
Q7.2	<---	Q7	.694	.896	24.256	***
Q7.1	<---	Q7	.687	.808	21.577	***
Q9.1	<---	Q9	.648	.722	18.564	***
Q9.5	<---	Q9	.667	.855	23.251	***
Q8.2	<---	Q8	.640	.884	24.758	***
Q8.1	<---	Q8	.481	.620	15.057	***
Q8.4	<---	Q8	.611	.849	23.032	***

(continued)

Table 1. (continued)

Path			Unstandardized coefficients	Standardized coefficients	T	p
Q8.5	<---	Q8	.561	.679	16.549	***
Q10.4	<---	Q10	.575	.684	16.926	***
Q10.1	<---	Q10	.675	.831	22.347	***

Table 2. Major measurement model fit indices

Model fit indices	Measurement model values	Acceptable values*
CMIN/DF	3.627	Lesser than 5
GFT	.970	Greater than 0.9
AGFI	.913	Greater than 0.9
NFI	.961	Greater than 0.9
CFI	.948	Greater than 0.9
RMSEA	.060	Lesser than 0.06

* Hooper et al., 2008; Hair et al. 2007; Hu and Bentler, 1999.

4 Results

4.1 t-Test

Ho = There is no significant difference between gender with respect to their Perception Towards Cosmetic Advertisements, Narcissist Personality Disorder, Sadistic Personality Disorder, and Intention to Purchase Cosmetics (Table 3).

Table 3. T-test of independent and dependent variables

	Gender	N	Mean	Std. deviation	Std. error mean	t	P
Perception towards cosmetic advertisements	Male	252	1.9762	.68524	.04317	-3.419	.001
	Female	260	2.1885	.71866	.04457		
Narcissist personality disorder	Male	252	1.9921	1.00196	.06312	-1.661	.097
	Female	260	2.1385	.99228	.06154		
Necrophilia personality disorder	Male	252	1.8294	.78751	.04961	-.074	.941
	Female	260	1.8346	.82408	.05111		

(continued)

Table 3. (continued)

	Gender	N	Mean	Std. deviation	Std. error mean	t	P
Sadistic personality disorder	Male	252	1.8373	.83816	.05280	.192	.848
	Female	260	1.8231	.83795	.05197		
Intention to purchase cosmetics	Male	252	2.0873	.88385	.05568	.087	.350
	Female	260	2.0154	.85636	.05311		

Source: Primary Data.

There null hypothesis for Perception towards Cosmetic Advertisements is rejected as the p-value is 0.001, which is lesser than 0.05, which is significant at 1%. For Narcissist Personality Disorder, Necrophilia Personality Disorder, Sadistic Personality Disorder, and Intention to Purchase Cosmetics, the null hypothesis is accepted, as the p-value is more than 0.05.

There is a significant difference between the perception of cosmetic advertisements and gender. There is no significant difference between Narcissist Personality Disorder, Necrophilia Personality Disorder, Sadistic Personality Disorder, and Intention to Purchase Cosmetics.

5 Regression

5.1 Model Summary

(See Table 4).

Table 4. Model summary for regression

Model	R	R square	Adjusted R square	Std. error of the estimate
1	.752 ^a	.566	.562	.99262

^a Predictors: (Constant), Sadistic, Necrophilia, Narcissist, Perception about Cosmetics Advertisements.

Source: Primary Data.

The model summary of the regression indicates that the four independent factors, such as Perception of Cosmetics Advertisements, Narcissist Personality Disorder, Necrophilia Personality Disorder, and Sadistic Personality Disorder, represent 75.2% of the variance. It means that 75.2% of the dependent factors have an influence on the independent factor which is 'Intention to Purchase Cosmetics', while the rest may be due to other variables.

5.2 ANOVA^a

(See Table 5).

Table 5. ANOVA^a for regression

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	650.486	4	162.622	165.049	.000 ^b
	Residual	499.543	507	.985		
	Total	1150.029	511			

^a Dependent Variable: Purchase Intention.

^b Predictors: (Constant), Sadistic, Necrophilia, Narcissist, Perception about Cosmetics Advertisements.

Source: Primary Data.

The value of $P = 0.000$ indicates that the overall model applied is good enough to identify the impact of dependent factors on the independent factor. It indicates that the study is relevant and it has got significant importance.

5.3 Coefficients^a

Table 6. Coefficients^a for regression

Model	Unstandardized coefficients		Standardized coefficients		t	Sig.
	B	Std. Error	Beta			
1	(Constant)	3.078	.672		4.578	.000
	Perception about cosmetics advertisements	-.154	.022	-.357	-7.009	.000
	Narcissist personality disorder	.476	.027	.638	17.784	.000
	Necrophilia personality disorder	.458	.036	.547	12.723	.000
	Sadistic personality disorder	.143	.037	.128	3.853	.000

^a Dependent Variable: Purchase Intention.

Source: Primary Data.

From the coefficient Table 6, it is clear that there was a significant relation (at 95% confidence level) of independent factors with four independent variables. ‘Perception

about Cosmetics Advertisements' has a 'p-value' of 0.000, 'Narcissist Personality Disorder' has a 'p-value' of 0.000, 'Necrophilia Personality Disorder' has a 'p-value' of 0.000, and 'Sadistic Personality Disorder' has a 'p-value' of 0.000. Hence, all the four independent factors, Perception of Cosmetics Advertisements, Narcissist Personality Disorder, Necrophilia Personality Disorder, and Sadistic Personality Disorder have an impact on 'Intention to Purchase Cosmetics'.

1. The regression equation: $y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 \dots + b_n X_n + \text{standard error}$, where, 'Y' = dependent variable (independent factor)
2. $a = 3.078$ (constant)
3. $b_1 = -0.154$
4. $b_2 = 0.476$
5. $b_3 = 0.458$
6. $b_4 = 0.143$

In the above table 'Narcissist Personality Disorder' has the highest coefficient value of 0.476, so Narcissist Personality Disorder has the highest impact on 'Intention to Purchase Cosmetics'.

The regression equation is given by:

Intention to Purchase Cosmetics = $3.078 + (-0.154)(\text{Perception about Cosmetics Advertisements}) + 0.476(\text{Narcissist Personality Disorder}) + 0.458(\text{Necrophilia Personality Disorder}) + 0.143(\text{Sadistic Personality Disorder}) + 0.99262$

As the value of significance is less than 0.05, so the null hypothesis is rejected and the alternative hypothesis is accepted. Thus, there is strong regression existing between the independent factors, i.e., Perception of Cosmetics Advertisements, Narcissist Personality Disorder, Necrophilia Personality Disorder, and Sadistic Personality Disorder, and the dependent factors, i.e., Intention to Purchase Cosmetics.

6 Correlation

6.1 Perception of Cosmetics Advertisements and Intention to Purchase Cosmetics

A correlation was conducted to find out the relation between the dependent variable 'Perception about Cosmetics Advertisements' and the independent variable 'Intention to Purchase Cosmetics'.

The correlation Table 7 indicates the correlation analysis is significant at a 0.01 confident level. It is found that there is a positive correlation between the dependent variable 'Perception about Cosmetics Advertisements' and the independent variable 'Intention to Purchase Cosmetics', where, $r = 0.429$.

Table 7. Correlation between perception of cosmetics advertisements and intention to purchase cosmetics

		Perception about Cosmetics Advertisements	Purchase Intention
Perception about cosmetics advertisements	Pearson correlation	1	.429**
	Sig. (2-tailed)		.000
	N	512	512
Intention to purchase cosmetics	Pearson correlation	.429**	1
	Sig. (2-tailed)	.000	
	N	512	512

** Correlation is significant at the 0.01 level (2-tailed).

Source: Primary Data.

6.2 Narcissist Personality Disorder and Intention to Purchase Cosmetics

Table 8. Correlation between narcissist personality disorder and intention to purchase cosmetics

		Narcissist	Purchase intention
Narcissist personality disorder	Pearson correlation	1	.648**
	Sig. (2-tailed)		.000
	N	512	512
Intention to purchase cosmetics	Pearson correlation	.648**	1
	Sig. (2-tailed)	.000	
	N	512	512

** Correlation is significant at the 0.01 level (2-tailed).

Source: Primary Data.

The correlation Table 8 indicates the correlation analysis is significant at a 0.01 confident level. It is found that there is a positive correlation between the dependent variable 'Narcissist Personality Disorder' and the independent variable 'Intention to Purchase Cosmetics', where, $r = 0.648$.

6.3 Necrophilia Personality Disorder and Intention to Purchase Cosmetics

The correlation Table 9 indicates the correlation analysis is significant at 0.01 confident level. It is found that there is a positive correlation between the dependent variable 'Necrophilia Personality Disorder' and the independent variable 'Intention to Purchase Cosmetics', where, $r = 0.499$.

Table 9. Correlation between necrophilia personality disorder and intention to purchase cosmetics

		Necrophilia	Purchase intention
Necrophilia personality disorder	Pearson correlation	1	.499**
	Sig. (2-tailed)		.000
	N	512	512
Intention to purchase cosmetics	Pearson Correlation	.499**	1
	Sig. (2-tailed)	.000	
	N	512	512

** Correlation is significant at the 0.01 level (2-tailed).

Source: Primary Data.

6.4 Sadistic Personality Disorder and Intention to Purchase Cosmetics

The correlation Table 10 indicates the correlation analysis is significant at a 0.01 confident level. It is found that there is a positive correlation between the dependent variable 'Sadistic Personality Disorder' and the independent variable 'Intention to Purchase Cosmetics', where, $r = 0.253$.

Table 10. Correlation between sadistic personality disorder and intention to purchase cosmetics

		Sadistic	Purchase intention
Sadistic personality disorder	Pearson correlation	1	.253**
	Sig. (2-tailed)		.000
	N	512	512
Intention to purchase cosmetics	Pearson Correlation	.253**	1
	Sig. (2-tailed)	.000	
	N	512	512

** Correlation is significant at the 0.01 level (2-tailed).

Source: Primary Data.

7 Discussion

Cosmetic companies and advertising agencies can develop a realistic brand message to connect with the common walks of life rather than tall claims or exaggerated claims. Concepts that are closer to human nature do tend to attract the audience. Cosmetics companies and advertising agencies can design a creative idea as well as brand concept considering the consumer insight instead of developing a fancy image and tapping unwanted needs. Creative concepts and creativity as a whole have always worked in favour of the people and organizations that have employed it.

Cosmetics companies should develop more organic products, such as natural ingredients, which are human-friendly in nature. It is necessary to create such products as herbal products are very much popular and accepted among Indians. Various companies that have come up with herbal products have also witnessed success.

As advertisements have shown a positive impact on the perception of cosmetics, thus, the advertisements should be made with due care and attention. On the other hand, advertising agencies can use a more realistic creative strategy with natural models rather than artificial images. Many consumers do not appreciate the way advertisements are shown to attract people.

Cosmetics companies and advertising agencies should employ creative ideas, such as 'Looking pleasant' rather than stressing about becoming fair. This type of concept would appeal to the target audience and lead them towards being natural and maintaining healthy skin, rather than modifying the skin with the help of cosmetics. Consumers who use cosmetics tend to become more selfish and self-centred. Thus, the need for the hour is to imbibe a sense of responsibility, so that they become helpful and responsible citizens. The companies can evolve a social model as part of their sales to help out the needy in society.

Creativity would always work and attract the attention of the audience. Cosmetic companies and advertising agencies should develop a creative idea underlying the theme of "Social movement" or "Togetherness concept" rather than focusing on self. This would help people also love others, the way they love themselves. Cosmetic companies and advertising agencies can come up with much more creative concepts and themes such as "Helping hands", which should focus on telling the audience that, the real beauty lies in winning the heart of people rather than look or style. The stakeholders should create awareness about sustainability social projects where the real beauty is in the form of humanity not in terms of make-up or external outlook.

Cosmetics companies and advertising agencies need to revisit their 'chick magnet advertisement' concept where the focus can be on one's own self-awakening concept and connecting with people and nature, thus, real social success can be attained rather than look or beauty. The companies should focus more on helping people with 'self-awareness', as is a very important life skill to be imbibed by people. Out of the ten life skills identified by 'World Health Organisation', it places 'self-awareness' in the number one slot, and is also termed as the mother of all life skills.

Cosmetics companies and advertising agencies need to execute the creative idea of social movement and the concept of taking people together, in order to exhibit the success of beauty rather than creating differences in look or style. The objective of using cosmetics should be to look beautiful, for their self-satisfaction and not to make people jealous. Consumers use cosmetics also due to peer pressure and expectation from society, rather than for their self-satisfaction. They tend to use cosmetics as it is a norm of society, these days. The advertising agencies can develop a concept to appreciate inner beauty, rather than the external look or outer beauty. Cosmetic companies and advertising agencies should work out in collaboration regarding the brand concept connecting to the realistic lifestyle of the target audience.

Cosmetic companies can conduct a beauty award every year based on the criteria of sustainable social projects undertaken by women and highlight the theme that beauty is

in minds rather than external looks. Through this message, companies can communicate a social message and cosmetic products can enhance the inner smartness of the person. This communication can act as a base for brand association.

Cosmetics companies and advertising agencies should see to it that they unveil a brand concept that is practical and connect with the day-to-day lifestyle of the target consumers. People develop thinking and develop a type of behaviour based on what they view on a regular basis. As perception has got a direct impact on purchase intention, cosmetics companies can employ brand activation techniques that enhance the overall perception of the brand and as a result of that experience, consumers may prefer to purchase. This would lead to a win-win situation, both for the cosmetics companies and consumers of cosmetics.

There is not much difference with respect to the perception of males and females towards cosmetics advertisements. As the respondents belong to the same age group, the majority of them have the same level of thinking and attitude. It is not only female, who wants to become fair but also male respondents who want to be fair. The youth should know that skin color comes to us through the genes of our parents, which cannot be changed. It is not the colour of the skin which makes people different, but the character, attitude, and behavior of the individual. Beauty is not which is outside but which is within. Thus, the colour of the skin should not be used to discriminate against people.

From the point of view of the consumers, they need to understand that they cannot become like the models which are shown in all forms of advertisements, such as television and print. On television media, the image and complexion of the model are enhanced using high-end cosmetics, make-up artists, lighting, and various graphic technologies. On the other hand, when it comes to print media, the models are edited using Photoshop software. Thus, the images are photoshopped. Print media can show testimonials of dark complexion women or people and highlight the beauty based on their work and humanity shown towards society.

Consumers should realize that true happiness is in helping others and not in being self-centered. Cosmetics can be used, but should not go on to become a priority in his life. What might happen and develop, cosmetics will always remain a 'want' and will not become a 'need'. Make-up should never come in-between when it comes to helping others, no matter their make-up would be affected. Consumers should spend more on their family members when compared to what they spend on cosmetics.

Consumers should keep things in mind that cosmetics should not be purchased with an objective to show off and make people jealous, rather it should be used to look good. The use of cosmetics should make them feel happy, content, and self-satisfied, thus, it should be used to tease people and put them down on how they look or carry themselves. Consumers should focus more on developing a good relationship with people and cosmetics should never come in between which would lead to a socio-economic divide.

The youth are under the impression that the images in the advertisements are not photoshopped, but the reality is that all the images which are on billboards, newspapers, and magazines are actually photoshopped, and that is how they look so beautiful and without any kind of mark on their face. Purchasing cosmetics thinking that by using

them they would become like the models that appear in the advertisements is next to impossible.

Cosmetic ads have a significant impact on the overall personality of the individual. Ads have a positive and negative impact on the audience. Not only women, but men also purchase and use cosmetics. Companies should consider making and broadcasting ads with a high level of social responsibility.

8 Conclusion

The study was an effort to assess the impact of cosmetics advertisements on youths and to check the extent to which they have developed Narcissist, Necrophilia, and Sadistic Personality Disorder. The extensive study offered a number of suggestions and ideas to 5 major stakeholders, namely the cosmetics companies, the advertisement company, the government, the public who is viewing the advertisement, and the customers who are purchasing the cosmetics products.

Time was a limitation as the study was conducted in a span of 6 months, and the study was conducted only taking into consideration Bengaluru city. The study has only taken 3 personality disorders into consideration namely, Narcissist, Necrophilia, and Sadistic Personality Disorder, and the study was only conducted taking youth into consideration who are between the age group of 15 to 29 years.

There is huge scope available for further research. Research can be conducted on consumer awareness about the legal aspect of advertisements and cosmetics ingredients. The scope of the study could be extended to youth in other metro cities. The study could also only focus on working women as they would have a higher purchasing power. Finally, studies can be conducted to assess the other kind of personality disorders that are developed among the viewers and users of cosmetics advertisements and products respectively. Surely, these kinds of studies will add value to the researchers and will help add to the existing pool of knowledge, and will act as a positive contribution to society.

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Effects of Social Media and the Internet on Academic Performance in Bahrain Universities

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Abstract. Students nowadays have access to a variety of privileges and possibilities to enhance their learning experience and academic performance through the internet and social media platforms. In this paper, the major objective is to find out how using social media platforms such as WhatsApp, Twitter, Facebook and Instagram impacts the students' overall academic performance and achievements. The following aspects will be covered by the research questions: (1) ICT's impact on education; (2) the effect of social media on students' academic performance at Bahraini universities; and (3) the most well-liked social networking sites among Bahraini university students. According to the research, social media enhances academic performance, and students use WhatsApp for academic purposes.

Keywords: Social media · ICT · Academic performance · Bahrain

1 Introduction

Nowadays, college students consider social media to be an essential component of their everyday life.

Social media platforms such as WhatsApp, Instagram, Facebook and Twitter are used to better enhance the learning experience and academic performance for college students. Using social media in a classroom context offers several advantages for the educational process as well as for improving communication between academic institutions, instructors, and students. Social networks are seen as additional channels for communication that allow resource sharing and inter-person engagement.

Hence, it's important to understand the advantages that these social media platforms could offer, such as how they might improve the learning experience, increase instructor and student involvement, and increase academic achievements. For example, groups facilitated by instructors in WhatsApp and Facebook for a specific course can improve the learning experience for the student.

On the other hand, the primary factor interfering with students' concentration is their improper use of social media platforms and the Internet during class time and when

working on coursework activities. Hence, this could lead to lack of attention affecting the overall academic performance. Therefore, it is vital to assess this problem to determine if accessing social media and using the Internet in class should be authorized.

The purpose of the study is to demonstrate the reasons behind college students' strong attachment to these platforms, in addition to raising awareness of the negative impact of such attachment on their academic performance. Furthermore, the students' perspective on these effects will be discussed. Finally, the social media's technological attributes and how they forged strong bonds with the media while accurately portraying how social networks operated on the Internet.

2 Literature Review

ICT has significantly aided the development of several areas on a worldwide scale. It is the driving force behind the astonishing changes in the digital world today. The broad adoption and usage of ICT by humanity has significantly changed how individuals interact socially and professionally. In addition, ICT has enabled efficiency gains in several business processes that were previously unthinkable, particularly in knowledge economies and innovation. For example, social media platforms are impacting people's life around the globe (Wuhan 2016).

As a result of new technologies, people's perspectives on time and location as they relate to their own behavior are changing likewise. The author (Brun and Hinostriza 2014) claims that mankind is on the edge of an extraordinary technological change. Information society and knowledge can now follow a deployment time and reach the full potential of the new, victorious paradigm thanks to the ICT installation period that took place over the previous thirty years, with its procession of "creative destruction" and generalization of a new social paradigm.

According to the analysis of the data, there will likely be institutional change, speculative bubble bursts, volatility, and unpredictability during the transitional phase before the turning point. If this theory is valid, archaic institutions would be under pressure from the unavoidable challenges of basic structural adjustment and transformation into integrating ICTs.

In this section, the following main aspects will be addressed and reviewed: ICT's impact on education, the effect of social media on students' academic performance at Bahraini universities, and the most well-liked social media platform among students.

2.1 ICT Impact on Education

Education is significantly impacted by the information society in general and new technologies in particular. The younger generations already integrated into this new culture, which directs us to concentrate on its significance in teaching efforts and its adaptability.

Nowadays, students have several alternatives for utilizing ICT in education to broaden their knowledge and experiences in their field of study (Cifuentes 2015). The author (Norazah 2015) mentioned that to support the educational process, it is crucial to start with informal (e.g., family, leisure, etc.) learning environments. Universities

recently adopted the new culture, including digital literacy, information sources, productivity tools for the workplace, teaching materials, and cognitive instruments. For instance, creating a class webpage will provide students with information about the course schedule, syllabus and relevant resources. In addition to being used for educational objectives and supporting cognitive, emotional, and social development, new technologies can enable people to spend more time with their families.

(Boranbayev and Nurbekov 2015) The fundamental difficulty with training that people and businesses will face in the twenty-first century will thus be lifelong learning. The information society has unquestionably been consumed by society at all levels in recent years.

To prepare people for the twenty-first century, lifelong learning should be introduced. To succeed in the information society, people should be able to learn through variety of different methods and adapt to changes in social, economic, and labor contexts (Rascón-Moreno 2014).

2.2 Social Networks' Effects on Academic Achievement

The learning process can be achieved through studying, instructing, observing, or practicing. It is described as a common long-term change in behavior indicative of learning new information or developing new abilities. However, cooperative learning is based on interactions between students working together in groups to learn a range of topics from a number of sources. This method is supported by the instructor's assistance in directing this group through the appropriate learning process (Towards 2006).

Social media usage is growing in our culture, which reflects how people interact with one another and are recognized. According to Stuart (2012) research, both interpersonal relationships and the educational process were impacted by the easeiness of accessing social media platforms. In addition, social media strategies assist the development of the educational process and results in strong learning outcomes for students since they provide several channels for communication and exchanging knowledge with other parties Alwagait et al. (2014) claims that if these resources are used in the educational field, we should acknowledge that web 2.0, with its focus on social dynamics, has facilitated the establishment of online learning communities and a wide range of peer collaboration networks. These networks were created in line with the reciprocity and cooperation principles to capitalize on the popularity of social media platforms. Social platforms would ultimately come to match this full description in the modern context by enabling users to connect across the network and use features like the creation of subgroups, public or private message, or chat, among others. These platforms vary in their goals: for example, Facebook was developed to cater to the various student groups in American Universities whilst LinkedIn is more of a business-oriented networking platform.

There are some advantages for using such platforms such as:

1. Boosts motivation for cooperation and collaboration in teamwork
2. Improve academic performance by using student feedback
3. Promote critical thinking and convey knowledge effectively

According to research, social media networking is used to educate people, discuss different topics and to spread scientific results (Gurkiar and Mukherjee 2015). This is carried out to democratize information and make it widely accessible.

The educational activities that frame every encounter will ultimately decide the worth of educational networks (Sana 2011). Social innovations in this educational event are being developed through social appropriation techniques rather than by the technology itself. The author makes the case that the suggested learning environment could prioritize social benefits over utilitarian ones. While the second encourages competition in the common user code that governs interactions and sharing the same community, the first provides details on activities that may be carried out on a given interface. According to a research in Boza Carreño and Conde Vélez (2015) the Web has recently changed the educational scene. The computer has supported education during the course of the 20th century. The network is currently the primary way for disseminating knowledge and information, and it is also frequently used for educational purposes. According to the author, ICT is a tool that is available to everyone and encourages equal opportunity (Montrieux et al. 2015). The authors assert that using technology in the classroom was an early adopter (Acheson et al. 2014). Through ICT-based education, people from diverse nations may forge close bonds. The needs, interests, and preferred modes of learning of the varied student body might also be considered. By utilizing the network to support academic practice in real-world contexts, it completes a comparable goal. Once distance is no longer an obstacle, ICT-based education enables communication with people from other countries. The author, (Al-Alwani 2014), also emphasizes how utilizing the Internet enables virtual interactions with people from various language and cultural backgrounds. According to the author (Satyanarayana and Meduri 2015), because of the advancement of computer multimedia and the growth of the Internet, learning is changing in terms of communication and interaction strategies. The network is saturated with resources for boosting the effectiveness of the online learning environment because of the rising interest in it. Collaboration and the expansion of shared information have been encouraged by Web 2.0. Utilizing Web 2.0 tools has improved the latter by converting the learning process into a social learning network.

2.2.1 Twitter as a Tool for Education

Twitter was utilized as a teaching tool when it was first released in 2006. In a research conducted in 2015 (Tur 2015), there were several instances when Twitter has been used to improve academic performance. The following options are available to teachers:

1. Share instructional resources with students and employees (e.g., photos, videos, papers, presentations, ...etc.).
2. Set up online study groups for their students to discuss specific themes or courses.
3. Provide students with a URL for each list or topic of interest.
4. Class assignments are completed outside of the traditional classroom setting. Give them access to a larger universe so that they may see the true value of ubiquity.
5. Tweet important information on Twitter so that the students can reflect on it, share their knowledge, and discuss the topic within a specific hashtag (i.e., #CourseCode_UniverstyName)

6. Before getting into a subject, the instructor may question the students about it before class to encourage their research skills. In addition, questions may get raised on Twitter for class discussion and response before the test. If you do this, it will be easier to clarify concepts and create a group summary of the most crucial ideas in the subject at hand.
7. Teachers can follow students on Twitter to track their engagement in Twitter discussions or to assess their level of topic knowledge.

However, studies examined how this medium has improved previous teaching strategies. Students in challenging classes can use Twitter to conduct research on a topic and provide their peers with pertinent links, comments, and other information. Additionally, it may be utilized as a brainstorming tool, enabling each student to add relevant thoughts to a subject under discussion (Junco 2010).

2.2.2 Using Facebook for Education

Facebook is a social network that stands out from its competitors and has more than 400 million users worldwide which gives it a mass medium to engage with people. Facebook is the most popular social network and is recognized as one of the best environments for learning and teaching in educational institutions (Seaman and Tinti-Kane 2013). According to research conducted by (Reynol 2015) and (Manca and Ranieri 2013), utilizing Facebook in educational contexts has several benefits such as:

1. Providing discussion among students which can encourage them for depth knowledge.
2. Improve the discussion's idea to be more related to reality.
3. Providing tools that enable users to share resources.

Researchers who investigated the effects of Facebook and its features on academic performance concluded that teachers should adopt some of their lesson plans for Facebook in order to promote more interactive learning and increase student interaction rather than relying solely on class time for discussion (Esquivel-Gómez 2015).

2.2.3 Using WhatsApp as a Teaching Tool

The growth in the use of smartphones as a communication channel tends to limit face-to-face interactions. Text messaging became available as smartphones developed, which increased the demand in purchasing such devices. In particular, a growing number of people are using WhatsApp which is one of the contemporary tools for communication, and as of September 2015, there were 900 million users. WhatsApp is so well-liked by users because it provides the quickest and least expensive form of communication.

The research by Johnson (2014) looks at the potential effects of the WhatsApp on students' academic performance in Ghanaian tertiary institutions. The study sample for the survey included 418 students (Male: 142, Female: 276). The researcher then interviewed (50) out of (418) participants to gather additional data.

The study concluded that WhatsApp is essential for quick and simple engagement among students since it allows for the exchange of resources and information. Another

research by Tulika B. in 2014 looked at how the WhatsApp app can affect the education of B.Ed. Students at an Indian University. In order to gather information for the study, 37 students participated in a questionnaire as part of the first approach, and an interview was conducted as a qualitative technique in the second approach. According to the study's results, 56% of students believe WhatsApp offers educational advantages, and 73% see the application as a tool that allows them to learn anytime they want. WhatsApp makes contacts and discussions more engaging, according to 64% of the students. The study found that WhatsApp's flexibility for student communication enhances learning. (Desmal 2017)

2.2.4 Instagram as a Tool for Education

In 2010, Instagram was launched and reached 400 million users worldwide (Instagram 2016). Instagram ranks seventh among the most well-liked social networking websites and apps. Numerous research and articles have been written about Instagram's effects on academic achievement. Considering the findings, the authors in (Jason 2013) proposed a few techniques that students may employ to enhance their academic performance such as:

1. **Spatial Intelligence:** The Instagram user uses his spatial intelligence to examine the images or videos to gather essential information that assists in elucidating the post's intended purpose.
2. **Linguistic intelligence:** The user's friend will be able to view the photos once they have been uploaded. The students are now employing their language intelligence to give observations and remarks on these images when the teacher uploads an image and asks the class to comment on it. These methods aid in the linguistic development of young individuals.
3. **Interpersonal Intelligence:** Teachers could be inspired by seeing what their students are posting on Instagram. This may be done by setting up a group, for instance, where the teacher is in charge and all the students are urged to demonstrate their aptitude for teaching techniques. Instagram offers additional educational advantages. The author (Hudson 2015) provided a list of 10 advantages of Instagram that might support academic progress such as:
 - Show student work: The creation of new works by art and design students will be encouraged, especially when they upload their creations and share them with friends and family.
 - Improve historical knowledge: Students analyze the images using historical dates and other relevant information when a teacher uploads an old photograph and instructs the class to focus on its history.
 - Mathematical steps: Teachers might upload mathematical procedures to help students grasp them better and to solicit their input. In this scenario, the teacher will be able to assess how well the students have understood the content and determine any topics that require extra discussion in class to help the students better comprehend the processes.

2.3 Conclusions of Literature Review

Social media clearly plays a significant influence in academic success. Hence, incorporating Web 2.0 technologies into the classroom curriculum, such as blogs and social networks, promotes individual learning and increases student engagement. Meanwhile, digital media may be utilized to complete the teaching and learning process in the information society, according to several authors such as (Boranbayev and Nurbekov 2015) and (Gurkiar and Mukherjee 2015). To conclude, social media use in a learning environment allows students' activities to go beyond those of traditional classrooms since social media can be accessed anytime, anywhere by instructors and students for a range of academic activities. Hence, such activities will improve students' academic performance. In addition, it gives instructors a simple way to get feedback from students and take part in online debates about its impact.

3 Whatsapp Mobile Application

In this section, WhatsApp groups' features and roles in relation to education are discussed. Through WhatsApp groups, students and teachers may communicate directly with one another.

3.1 Forms of WhatsApp Group Communication

The bulk of WhatsApp groups that were the focus of the inquiry used verbal communication, images, URLs, and less usage of videos and audios. Some WhatsApp groups also used the GPS location feature. These groups were all given names based on the topic name or subject code. Teachers and students are using their iPhones to take pictures of classroom board notes and printed books, which are then shared in WhatsApp groups. Both professors and students routinely use emoticon choices in WhatsApp groups.

3.2 The Main Purpose of WhatsApp Groups

For four main reasons, instructors and students are urged to start WhatsApp groups.

- a) The major objectives are to encourage student engagement and to offer learning tools that might help other students.
- b) WhatsApp groups might save time and effort instead of bringing all students together in one place, by promoting a welcoming social environment among its members, these groups encourage students to engage more fully.
- c) Students may engage in discussions regarding facts about a subject with one another in WhatsApp groups, which helps them learn something new or pertinent to the subject.
- d) In this case, by relating it to actual cases, students may draw certain conclusions about the subject. The abundance of educational resources that professors and students in these organizations share may improve learning. (Desmal 2017)

4 Conclusions

Examining how social media affects academic achievement was the main goal of this study. The final findings of the survey suggest that every student who possesses a smart-phone also makes use of social media. WhatsApp and Facebook are the two most popular social networking services among college students. The amount of time spent online and on social media by college students is shown by this statistic. Students may utilize social media to further their academic objectives because of their increasing interest in using it at university level. According to experts, university is the greatest place for students to utilize social media. This might be seen as showing that students are attempting to use social media as effectively as possible for educational goals.

Sharing academic resources is made easier by modern technologies. There are several methods to share and trade resources via social media sites (images, videos, audios, documents, and others). However, social media currently has a bigger influence on academic accomplishment due to presenting educational advancement-supporting tactics. However, integrating Web 2.0 tools like blogs and social networks into the curriculum in the classroom encourages individual learning and raises student engagement. Using digital tools to complete the teaching and learning process is advantageous in the context of today's information culture. Hence, it is impossible to dispute the benefits modern technology adoption brings to the process of academic accomplishment. When social media is used, educational activities for students can go beyond those of traditional classrooms because teachers and students can use these platforms whenever and wherever they want for a variety of academic purposes. Hence, this will improve students' academic performance and give instructors an easier way to receive and discuss student comments on social media platforms.

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Young Customers' Perception of Sharia Financial Services Mobile-Banking and Behavioral Intention Consequences

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Abstract. The growing number of mobile banking applications is a fascinating phenomenon to understand better how people use financial services. This study looked into the behavior of mobile banking users considering perceived usefulness, perceived ease of use, security, and the mediating effect of consumer attitudes. We investigated a sharia-based financial services mobile banking application called Baitul Maal wat Tamwil (BMT), developed by a leading private university in Indonesia. We conducted explanatory research using an online survey involving university students who become customers of the BMT. One hundred and seventy-six respondents were applied based on a non-probability sampling technique with the purposive sampling method. The data analysis uses structural equation modelling (SEM) with the AMOS 22. Our finding revealed that perceived usefulness, perceived ease of use, and security influence behavioral intentions to use mobile banking. Furthermore, consumer attitudes mediate the association between perceived usefulness and ease of use on behavioral intention in mobile banking. The contribution of this paper lies in achieving a deeper understanding of perceived usefulness, ease of use, security, and consumer attitude on behavioral intentions in mobile banking. Hopefully, this will enrich the investigation of the use of technology in sharia financial services.

Keywords: Perceived usefulness · Perceived ease of use · Security · Customer attitude · Behavioral intention · Mobile banking

1 Introduction

Today's information technological (IT) advancements are accelerating, including in the banking industry. IT simplifies financial transactions and affects nearly all industrial sectors in Indonesia and worldwide [1]. In the banking industry, the level of services provided determined client satisfaction since the bank service system heavily relies on IT and is a service-oriented business. Banks usually offer various products and services to their customers, such as e-banking, m-banking, e-wallets, e-cash, and e-checks [2].

One of the financial services that are growing in response to this situation is electronic banking [3].

Customers can utilize electronic banking services to access information and carry out financial activities, such as internet banking, m - banking, SMS banking, and phone banking. Now, transactions that were previously only feasible through an ATM can be carried out on mobile devices or the internet. One of the clients' most preferred payment options is mobile banking, allowing them to complete transactions solely through their mobile phones [4]. It has numerous advantages and benefits, enabling customers to conduct transactions anytime and from any location.

Discussing consumer acceptance of technology is interesting, and it can be tracked from the study of Davis [5], who introduced the theory of the Technological Acceptance Model (TAM). TAM, created based on the perceived value and ease of information technology use, focuses on user attitudes regarding its use. TAM is frequently used to anticipate the level of user acceptability and usage-based views of the usability of information technology by taking into account the ease of use of information technology. Another relevant factor which determines people's evaluation of technology is security since performing banking transactions involves the risk of the fund inside. The safer the transaction, the preferable for the consumer as it means they do not cope with the risk of losing their money.

We chose the research setting in mobile banking of financial services developed by a leading private university in Yogyakarta, Indonesia, in the form of Baitul Maal wat Tamwil (BMT). The BMT perform financial services based on Sharia principles. As a BMT that uses mobile banking applications, it is interesting to investigate the extent to which consumers use this application, taking into account their perceptions of ease of use, usefulness, security, and attitude.

2 Literature Review and Hypothesis Development

This section discussed the conceptual definition of the research variables. We consider perceived usefulness, perceived ease of use, security, consumer attitude and behavior intention in our research framework. The following is the discussion about our conceptual research definitions.

Perceived usefulness refers to how people believe using a specific system will improve their work performance. The importance of perceived usefulness has been extensively recognized in the electronic banking sector [6, 7]. Previous research showed that perceived usefulness impacted customer attitude [8–10]. Taylor & Strutton [11] and Kanchanatee [12] stated a direct and indirect relationship between perceived usefulness, attitudes and intention to use e-marketing. Based on previous research by Shanmugam [13], attitude also partially mediates the relationship between perceived usefulness and behavioral intention to use mobile banking. Thus, we developed the first hypothesis.

H1: Perceived usefulness has a positive effect on customer attitude.

Perceived ease of use is the extent to which a person believes that using an exacting approach will cost nothing or make their effort lighter [14, 15]. Pavlou [16] stated that perceived ease of use is an intrinsic motivation for using technology to conduct online

business. Ease is a state or level when someone thinks that using a precise system will not take effort or that people will have no trouble understanding the technology. Al-Ajam & Nor [17] state that perceived convenience is how people believe technology will be free from effort. Previous research by Al-Ajam & Nor [17] showed the relationship between perceived ease of use and behavioral intention to use mobile banking. Perceived ease of use also showed a positive effect on customer attitude [9, 18, 19]. Hence, we proposed the second hypothesis.

H2: Perceived ease of use positively affects customer attitude.

Security is the level of safety customers associate with information technology, influencing their decision to use it. It shows customers' perceptions of the bank's ability to protect unauthorized users' personal information obtained through electronic transactions are considered security. Because of the security of electronic transactions, customers can trust their data security when using mobile banking. Many banking studies have highlighted the importance of security and privacy in online banking [20, 21]. Salisbury [22] defined perceived web security as the degree to which a user believes that an online retailer or website is secure. According to Aslam [23], security is consumers' perception of trust that their personal information is unseen, stored, or manipulated during data transfer to other parties. Previous studies showed that security concerns are a barrier to adopting technology [24]. Safe conducting of financial transactions with mobile technology is essential to alleviate concerns about using technology to make payments. Previous research showed security and privacy positively affect customer attitudes toward online banking. Security positively affects customer attitude [25–27]. Therefore, we developed our third hypothesis regarding this idea.

H3: Security positively affects customer attitude.

Customer attitude is the behavior exhibited by consumers in searching for, buying, using, evaluating, and consuming service products and services that they hope will satisfy their needs [28]. It reflects someone's feelings when performing a behavior. Based on previous research by Sanchez-Mena [29], attitude towards educational video games directly and positively influences behavioral intention. Furthermore, customer attitude positively affects behavioral intention [18]. Behavioral intention is the extent to which a person intentionally plans to engage in or abstain from specific future behavior [30]. Consumer behavior intention refers to their desire to own, dispose of, and use specific products or services. As a result, consumers may want to obtain information, tell others about their product experiences, purchase a particular product or service, or dispose of a product in a specific way. The following is our fourth hypothesis regarding this relationship.

H4: Customer attitude positively affects behavioral intention.

The following are our hypotheses to test whether there is a direct relationship between perceived usefulness, perceived ease of use and security on behavior intention. Research by Hosseinin [31] stated that perceived usefulness positively correlates with the intention to use m-banking. Other previous studies also showed a positive relationship between perceived usefulness and behavioral intention [18, 32, 33]. Thus, we proposed the fifth hypothesis.

H5: Perceived usefulness positively affects behavioral intention.

Previous research findings also revealed that perceived ease of use positively affects behavioral intentions [34, 35]. Then, we developed the sixth hypothesis.

H6: Perceived ease of use positively affects behavioral intention.

Based on previous research by Pikkarainen [36], there is a positive effect between security and privacy on the intention to adopt online banking. Furthermore, security positively affects behavioral intentions [35, 37]. Based on this idea, we proposed the seventh hypothesis.

H7: Security positively affects behavioral intention.

According to the previous discussion, we visualize the relationship of our research variables in Fig. 1.

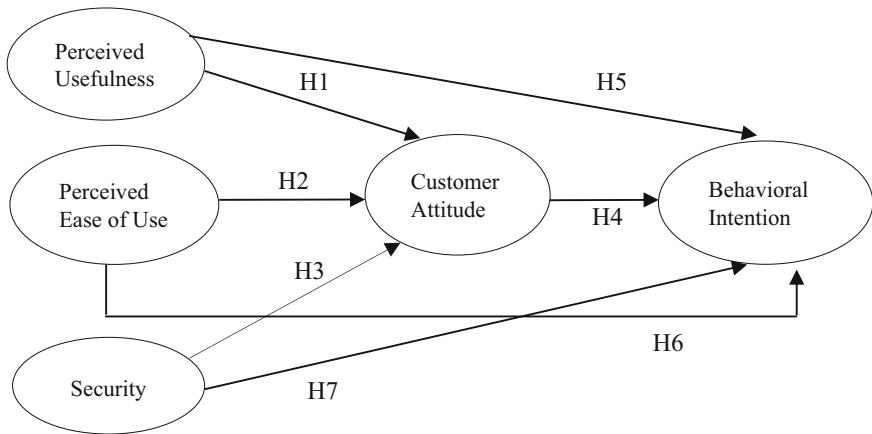


Fig. 1. Research model

3 Method

We conducted a quantitative approach by using explanatory research. The research setting is the BMT, which belongs to a leading private university in Yogyakarta, Indonesia. The mobile banking application is a newly launched service from the BMT to respond to technological advancement in the financial service industry to maintain its competitiveness. These BMT customers are mainly lecturers, staff, and university students who own the BMT. They started to use this application after its establishment in 2018. Our study intentionally chose these students' customers since their decisions to be BMT customers are voluntary. It is different from the lecturers and academic staff customers who mandatory requested to be the customers of the BMT, which belongs to their university. We use purposive sampling to collect the final usable sample size of 176. The data collection uses online questionnaires due to the Covid-19 pandemic, where there are no offline lectures in the university. The data was analyzed using the AMOS 22 application tool and structural equation modelling.

4 Data Analysis, Results and Discussion

Data from 176 respondents showed that the dominant age was 21–25 (66.5%). The data indicates that the dominant gender is 93 females (52.8%). The primary respondent's education was undergraduate (74.4%). Most respondents' expenses were at \geq IDR 2,000,000, 33%. Most use mobile banking because it saves time (50%). The dominant visit time ranged from 1–3 times per week (65.3%). All twenty items' validity test results were valid because the instrument meets the accepted standards: the factor loading value \geq 0.50. Based on the calculated reliability, the Composite Reliability coefficient value on all variables is greater than 0.6. Thus, all research variables are reliable.

Table 1. Goodness-of-fit criteria

The goodness of the fit index	Cut-off value	Model test result	Model
Significant probability	≥ 0.05	0,013	Good Fit
Chi-squares	308,254 (df = 269)	185,519	Marginal Fit
RMSEA	≤ 0.08	0,040	Good Fit
GFI	≥ 0.90	0,907	Good Fit
AGFI	≥ 0.80	0,865	Good Fit
CMIN/DF	≤ 2.00	1,279	Good Fit
TLI	≥ 0.90	0,970	Good Fit
CFI	≥ 0.90	0,977	Good Fit

Based on Table 1, most of the indicators of Goodness of Fit showed Good Fit results. Thus, the model can be used for further data analysis. The next step is testing the proposed hypotheses. The results of the hypotheses testing showed in Table 2.

Table 2. Hypothesis testing

	Estimate	S.E	C.R	P	Decisions
CA \leftarrow PU	,683	,198	3,442	***	S
CA \leftarrow PEOU	,356	,140	2,547	,011	S
CA \leftarrow S	,146	,130	1,122	,262	NS
BI \leftarrow CA	,473	,143	3,314	***	S
BI \leftarrow PU	–,206	,221	–,933	,351	NS
BI \leftarrow PEOU	–,030	,133	–,227	,821	NS

(continued)

Table 2. (continued)

	Estimate	S.E	C.R	P	Decisions
BI ← S	,699	,150	4,667	***	S

Note:

S: supported

NS: not supported

Based on Table 2, the result of hypothesis 1 testing shows that the estimated value is 0,683. Therefore, perceived usefulness positively affects customer attitude. The p-value is $0,000 < 0,05$, which indicates that hypothesis one (H1) is supported. This finding supports the previous result of Kanchanatane [12], which stated that perceived usefulness's consequences on consumer attitudes toward using e-marketing. This idea also supports the finding of Indarsin [38], which revealed that perceived usefulness affects attitudes towards m-commerce. Based on this finding, the BMT must build consumer perception of the usefulness of using mobile banking to create a positive attitude toward using mobile banking.

Our results of hypothesis 2 testing show that the estimated value is 0.356. Our findings revealed that perceived ease of use positively impacts customer attitude. The p-value is $0.011 < 0.05$, which means significant, so hypothesis 2 (H2), which states that "perceived ease of use positively affects customer attitude", is supported. This outcome is in line with Suki's earlier discovery [39], which stated that perceived ease of use influence consumer attitude toward using 3G mobile. Moreover, this finding also supports the result of Guritno [19], which revealed that perceived ease of use influenced consumer attitude toward using online airline ticketing. Thus, the BMT management needs to explain the ease of using mobile banking to shape their consumer's positive attitude toward using mobile banking.

Our data analysis of hypothesis 3 shows that the estimated value is 0,146. The results show that the relationship between security and customer attitude is negative, meaning there is no direct influence between security and customer attitude. The p-value is $0.262 > 0.05$, which means there is no significant relationship between security and customer attitude. Thus, our hypothesis 3 (H3) is not supported. This result is not in line with the previous finding of Jahangir and Begum [26], which stated that security affects consumer attitude toward online banking and is also contrary to the result of McCole et al. [40], which indicated security affects consumer attitude. Thus, it is interesting that BMT consumers did not consider security in forming their positive attitude toward using mobile banking. This result may be because they are mainly students already familiar with mobile banking, so they did not have a significant risk in using the new launch mobile banking.

Our data processing of the hypothesis 4 result shows that the estimated value is 0.473. Therefore, the results demonstrated that Customer Attitude affects Behavioral Intention. The p-value is $0.000 < 0.05$, which means significant, so hypothesis 4 (H4), which states that "customer attitude positively affects behavioral intentions," is supported. This finding supports the previous results of Sanches-Mena [29], which revealed that consumer

attitude affects behavioral intention of using an educational video game. Thus, the BMT management needs to shape a good consumer attitude toward using mobile banking to create an excellent behavioral intention.

Our statistical analysis result of hypothesis 5 shows that the estimated value is $-0,206$. It indicates that the relationship between perceived usefulness and behavioral intention is negative, meaning there is a negative influence between perceived usefulness and behavior intention. However, the p-value is 0.351 , greater than 0.05 , meaning that the relationship between perceived usefulness and behavioral intention is insignificant. Thus hypothesis 5 (H5) is not supported. This finding is not aligned with Kuo and Yen [32] and Chong [8], which found that perceived usefulness impacts behavioral intention. Thus, for BMT consumers, attitude formation becomes essential in creating their behavioral intention.

Our data analysis of hypothesis 6 shows that the estimated value is -0.030 . Our results showed that perceived ease of use negatively impacts behavioral intention. However, the p-value is 0.821 , greater than 0.05 , which means that the relationship is insignificant. Thus, perceived ease of use did not impact behavioral intention. Therefore, hypothesis 6 (H6) is not supported. This finding is not in line with the previous results of Lai [41] and Luarn [34], which revealed that perceived ease of use impacts behavioral intention. Thus, the BMT management must create a positive attitude toward using mobile banking since this is the antecedent of their consumer behavior intention.

Our data analysis of hypothesis 7 shows that the estimated value is 0.699 . Therefore, there is a positive relationship between security in behavior and intention. The p-value is $0.000 < 0.05$, which means significant, so (H7), which states that “security has a positive effect on behavioral intentions,” is supported. This result is consistent with the outcome of Qureshi [37] and Pikkarainen et al. [36], which revealed that security impacts behavioral intention. Although security did not influence consumer attitudes toward mobile banking, it has been demonstrated that security positively impacts behavioral intentions to use it.

5 Conclusion and Suggestion

Our hypothesis testing results provide a new framework for understanding attitude formation and its impact on behavioral intention. It demonstrated that perceived usefulness and ease of using influence consumer attitudes toward mobile banking. Perceived usefulness and perceived ease of use do not impact behavioral intention. Thus, it is vital to shape a positive consumer attitude toward mobile banking since consumer attitude substantially affects behavioral intention. Our data analysis showed that security did not affect consumer attitudes. Interestingly, security directly influences behavioral intention in using mobile banking. This result gives insight that although security did not affect attitude formation, it directly affected the behavioral intention of using mobile banking. Therefore, although they have a different process of impact, perceived ease of use, perceived usefulness and security are critical aspects in shaping the behavioral intention of BMT consumers in using mobile banking.

We have not considered religious aspects and Syariah compliance considerations in our research model. Thus, we recommend that future research incorporate our research limitations in the future. Those two variables may become relevant in the Syariah banking context to be investigated.

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The Social-Media Websites Addiction and Its Impact on University Students' Mental Health in Palestine

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Abstract. The study aimed at identifying the degree of addiction to social media websites and its relationship to the mental health of university students in the Gaza Strip according to some variables (gender, marital status, number of hours in using social media). The researchers used the descriptive correlational approach (causal-comparative), as for the data collection the researchers designed a questionnaire that was distributed to a sample consisting of 100 students who were chosen randomly. The results showed that there are statistically significant differences in the level of addiction to social media websites and the level of mental health among the university students attributed to the variable of gender, marital status, and the number of hours of using social media platforms. In light of the results of this study, some suggestions and recommendations were concluded.

Keywords: Addiction to social media · Mental health · Gaza universities

1 Introduction

Students at the university level represent the main pillar in the development plans in societies because after their graduation they form specialized bodies to implement development plans. Therefore, attention must be paid to them, both psychological and cognitive, which contributes to benefiting from their abilities to the fullest extent possible (Saleh and Al-Masdar 2013).

The world today faces many different developments that have a significant impact on society in general and on youth in particular, and one of the most important of these developments is the emergence of social media websites, which have spread very quickly recently (Tibi and Bouanan, 2020). Indeed, social media websites (such as Facebook - Twitter - Instagram - YouTube and others) are no longer just sites on the Internet, but have become an integral part of the daily and social life of many individuals and have achieved various gratifications for their users (Keller Al-Helou et al.).

Social media invade our daily lives more than ever before, even in our intimate and private lives, the entire world has become a circle of virtual life on the internet. Social media indeed facilitates communication with others, but in return it takes us away from real life, throwing us into the abyss of virtual life, we sacrifice face-to-face conversation

and human relations so the undesirable effects of technology become so destructive that it can threaten to nullify its benefits (Al-Labban, 2000). University students are the most exposed to these sites, due to their increasing demand for the use of modern technology represented in these networks, more than any other category, this is due to some psychological and social factors represented in the desire of young people to establish relationships and friendships with others in different countries of the world (Ellison and Boyd 2007).

1.1 Objectives of the Study

The main objectives of the study are as follows:

1. Detecting the level of the degree of addiction to social media among the students of the University College of Applied Science.
2. Highlighting the level of mental health manifestations among them.
3. Shed light on the correlation between the use of social media and the level of manifestations of mental health among students.
4. Find out if there are differences in addiction to social media attributed to the gender variable, marital status variable, or the number of hours in using social media.

1.2 Terminology of the Study

The terminology of the study can be defined as follows:

- *Social Media Addiction*: It is the extreme use of social media, and not feeling the waste of time or the inability to dispense with browsing through these sites, measured by the total score obtained by the study sample based on the social media addiction scale prepared for the current study (Al-Tibi et al. 13: 2020).
- *Mental Health*: The individual's positive characteristics help in his good compatibility with himself and with his environment, socially and materially, as well as liberation from negative traits and pathological symptoms that impede this compatibility. (Al-Quraiti, The Person, 1992:9) this compatibility. (Al-Quraiti, The Person, 1992:9).

2 Methodology of the Study

The study followed the descriptive correlational approach, to detect the level of Internet addiction and mental health among university students, and the correlational differences between them.

2.1 The Sample of the Study

The researcher applied the study tools to an exploratory sample of (30) students; They were randomly selected to answer the current study's measures (social media addiction, and mental health), to calculate its psychometric properties (reliability and validity), while the actual sample consisted of (100) students, as shown in the Table 1 below:

Table 1. Statistical characteristics of the study sample.

Variables	Statement	Number	Percentage
Gender	Male	28	28.0
	Female	72	72.0
	Total	100	100%
Marital status	Single	79	79.0
	Married	21	21.0
	Total	100	100%
Number of hours for using social media	0–1 h	7	7.0
	1–2 h	28	28.0
	3–4 h	29	29.0
	4 h or more	36	36.0
	Total	100	100%

2.2 The Study Tools

The researchers designed and used two main tools; the Scale of Addiction to Social Media and the Mental Health Scale.

Validity and Reliability of the First Tool (Social Media Addiction)

The validity of the internal consistency of the scale was verified by calculating the Pearson Correlation Coefficient. It is clear from Table 2 that there is a significant relationship between the items of the scale and its total score. Also, the reliability of the Scale was calculated using Cronbach's Alpha Coefficient, and the half-segmentation, as shown in Table 3 below:

Table 2. Correlation coefficients between paragraphs and total score.

Item	Correlation coefficient	Item	Correlation coefficient	Item	Correlation coefficient
1	**0.625	8	**0.625	15	**0.585
2	**0.754	9	**0.632	16	**0.645
3	**0.525	10	**0.565	17	**0.754
4	**0.625	11	**0.754	18	**0.636
5	**0.765	12	**0.625	19	**0.645
6	**0.632	13	**0.645	20	**0.754
7	**0.565	14	**0.636	21	**0.825

** Statistically significant at 0.01

Table 3. Reliability coefficient of Cronbach's Alpha and the half-segmentation.

Domain	Cronbach's Alpha	Correlation before modification
Addiction to social media	0.889	0.895

It is clear from Table 3 that the reliability coefficients are high which proves the viability of using this tool to collect the data of the current investigation.

Validity and Reliability of the Second scale (Mental Health Scale)

The validity of the internal consistency was verified by calculating the Pearson Correlation Coefficient between all items of the scale, and the total score for the domain by the SPS, as shown in Table 4.

Table 4. Correlation coefficients between the items and total score

Item	Correlation coefficient	Item	Correlation coefficient	Item	Correlation coefficient
1	**0.754	12	**0.625	22	**0.754
2	**0.625	13	**0.565	23	**0.656
3	**0.741	14	**0.696	24	**0.714
4	**0.636	15	**0.754	25	**0.645
5	**0.645	16	**0.639	26	**0.714
6	**0.565	17	**0.512	27	**0.636
7	**0.754	18	**0.636	28	**0.647
8	**0.636	19	**0.517		
9	**0.565	20	**0.645		
10	**0.702	21	**0.636		

** Statistically significant at 0.01

It is clear from Table 4 that there is a significant relationship between the items of the scale and their total score. Then the reliability of the mental health scale was calculated using Cronbach's Alpha Coefficient, and the half-segmentation, as shown in Table 5 that shows high-reliability coefficients.

Table 5. The reliability coefficient of Cronbach's Alpha and the half-segmentation.

Domain	Cronbach's Alpha	Correlation before modification	Correlation after modification
Mental health	0.84	0.91	0.953

3 The Results of the Study

3.1 The Results of the First Question

To answer the first question i.e. “What is the level of addiction to social media websites among university students?”; The researchers calculated the means, and standard deviations, as shown in Table 6 below:

Table 6. Means and standard deviations to detect the level of addiction to social media

Scale	Mean	Standard deviation	Relative weight
Addiction to social media	1.74	0.422	57.94

It is clear from the table that the mean of the responses is (1.74), while the standard deviation is (0.422) with relative weight (57.94%) for addiction to social media. So it can be interpreted as an average level. In other words, the results showed that there is a negative and statistically significant correlation between the degree of use of social media websites and the degree of mental health among university students. The current study agreed with the results of some previous studies (Kaddoura 2017), (Al-Helou et al. 2018) and (Al-Ajmi et al. 2021), which their results indicated a correlation between the use of mobile applications on the internet and the sub-scales of the psychological loneliness and between shyness, self-esteem and pessimism.

It is worth mentioning that the negative correlation between the use of social media websites and mental health among university students can be attributed to the fact that students who use social media rationally are less likely to the emergence of disturbances or problems affecting their psychological status. Also, the students who enjoy good mental health and the ability to adapt to themselves and their surrounding indicates reasonable use of social media websites.

3.2 The Results of the Second Question

To answer the second question “What is the level of mental health among university students?”; The researchers calculated the means, and standard deviations, as shown in the following table.

Table 7. Means and standard deviations to detect the level of mental health

Scale	The mean	Standard deviation	Relative weight
Mental health	2.13	0.266	70.85

It is clear from Table 7 that the mean of the responses for mental health is (2.13), while the standard deviation is (0.266) with a relative weight (70.85%), which is a high

level. The results of the current study agree with the results of (Younis 2016), (Kaddoura 2017), and (El-Helou et al. 2018), who investigated the impact of using the internet on academic achievement, social adjustment, depression, and communication skills among students of Al Qassim university, their results indicated a high level of social adjustment and social skills communication for those who use the internet moderately and little.

In other words, the current investigation revealed statistically significant differences in the level of mental health due to the level of addiction to social media among university students. This conclusion can be attributed to the fact that the low level of student use of social media guarantees a high level of mental health for the university student in general, and this is due to the reasonable and acceptable use of social media. Also, the less use of social media websites the higher level of psychological compatibility, social adjustment, and communication skills among university students because they will have good mental health. The researchers believe that the decrease in addiction to social media is due to the student's awareness of the good use of social media in a positive way which means they enjoy good mental health. Accordingly, People who have a high level of addiction to social media websites suffer from frequent depression and increased problems, which causes a deterioration in their mental health, and this causes an increase in the time they spend with social media and their preference for communicating through social media rather than real life.

3.3 The Results of the Third Question

To answer the third question i.e. "Is there a relationship between addiction to social media and mental health?", the researchers used the Pearson Correlation Coefficient to find out the strength of the relationship between each of the dependent variables and the independent variable. The following Table 8 shows the correlation coefficients between the degrees of the social media addiction scale, and the degrees of the mental health scale. It is clear from the table that there is a significant inverse relationship between addiction to social media and mental health, as shown below:

Table 8. Correlation coefficient values between the study variables.

Scales	Mental health	
	Correlation coefficient	Sig. Level
Addiction to social media	**0.311-	0.002

Statistical significance at the level 0.05 for the degree of freedom $(100 - 2) = 0.138$.

Statistical significance at the level 0.01 for the degree of freedom $(100 - 2) = 0.181$.

3.4 The Results of the Fourth Question

To answer this question "Is there an impact of social media addiction on mental health?", the researchers used simple regression and simple linear regression equations, and the

Table 9. The value of (beta) for the significance of the simple regression coefficients.

Dependent variable	Independent variables	Standard and non-standard regression coefficients				Sig. Level	Covariance Coefficient of determination (R ²) value
		Non-standard regression coefficient(b)	Standard error	Standard regression coefficient(beta)	(t)Value		
Mental health	Constant	1.78	0.108		16.5	**	0.097
	Addiction to social media	-0.196	0.331	0.065	0.196	//	

/// is not statistically significant.

* Statistically significant at the 0.01 level.

following table shows the prediction of addiction to social media’s impact on mental health (Table 9).

From the previous table, it is clear that the (beta) values of the simple regression coefficients for social media addiction are not statistically significant at the 0.01 level, which indicates that there is no effect of social media addiction on mental health.

3.5 To Answer the Fifth Question: “Are There Statistically Significant Differences Among the Averages of Social Media Addiction Attributed to the Variables (Gender - Marital Status - Number of Hours of Using Social Media)?”

The researchers tested three hypotheses that were derived from the previous question. The first hypothesis is “**There are no statistically significant differences among the averages of social media addiction attributed to gender**”. So, the researchers calculated the mean and standard deviation, besides the (t-test) test according to gender variable (male-female), as shown in Table 10 below:

Table 10. The average and the computed value and its significance attributed to gender

Gender	Frequency	Average	Standard deviation	“T”	Sig. Level
Male	28	1.901	0.439	2.47	0.015
Female	72	1.675	0.401		

It was found from the previous table that the value of the significance level (0.015) sig is less than $\alpha = 0.05$, so there are statistically significant differences among the averages of social media addiction according to the gender variable in favor of males.

The results of the current study go in line with the study of (Younis 2016), (Tibi et al. 2019), and (Al-Sawafi et al. 2021). In other words, the table indicates that the percentage of males is (1.901) which is more than the percentage of females i.e. (1,675). This could be due to the fact that females spend most of their time with their commitments and household chores, so they are less likely to use social media websites than males. Also,

some Palestinian conservative families do not allow females to use social media continuously, so we find that they use it in a restricted and limited way or under supervision compared to males, who have more freedom.

The second hypothesis is **“There are no statistically significant differences among the averages of addiction to social media attributed to the marital status variable”**. To test this hypothesis, the researchers calculated the mean and the standard deviation, as well as the (T-Test) according to the marital status variable, as shown in Table 11 below:

Table 11. The average and the computed value and its significance due to marital status

marital status	Frequency	Average	Standard deviation	“T”	Sig. Level
Single	79	1.762	0.427	1.09	0.276
Married	21	1.649	0.401		

It was found from the previous table that the value of the significance level (0.276) sig is greater than $\alpha = 0.05$, so the results revealed that there are statistically significant differences at the level (0.01) in the level of addiction to social media among university students attributed to the marital status variable. In other words, the table shows that the percentage of single students (79) is greater than the percentage of married ones (21) in addiction to social media websites.

The researchers attributed this finding to the fact that single people have a passion for exploration and creating new relationships because they have more free time and fewer commitments than married people. In other words, married people have daily commitments, responsibilities and busy life compared to single people so their use of social media is not that much for single people.

The third hypothesis is **“There are no statistically significant differences among the averages of social media addiction attributed to the variable Number of Hours of Using Social Media”**. To test this assumption, the researchers calculated the mean and standard deviation, besides the One-Way ANOVA test according to the variable of the number of hours for using social media websites. The following table shows the results obtained:

Table 12. The One-Way ANOVA analysis to identify the addiction to social media according to the variable Number of Hours of Using Social Media.

Variance source	Sum of squares	Degrees of freedom	Mean squares	F value	Sig. Level
Between groups	5.24	3	1.747	13.5	0.00
Within groups	12.4	96	0.129		
Total	17.6	99			

It was found from the previous table that the value of the significance level (0.00) sig is less than $\alpha = 0.05$, so there are statistically significant differences among the averages of addiction to social media according to the variable number of hours of using social media, and through Scheffe's Test it was found that the differences are in favor of the category of university students who use the social media platforms from (3–4) hours. This can be justified by the wise use of such websites which is somehow moderate and not addictive use (Table 12).

3.6 To Answer the Sixth Question I.E. Are There Statistically Significant Differences Among the Averages of Mental Health Attributed to the Variables (Gender - Marital Status - Number of Hours of Using Social Media?)

The researchers tested three hypotheses that were derived from the previous question. The first hypothesis is “**There are no statistically significant differences among mental health averages attributed to gender variable**”. To test this assumption, the researchers calculated the mean and standard deviation, besides the (t-test) test according to gender variable (male-female), as shown in the following Table 13:

Table 13. The average responses according to gender (male-female)

Gender	Frequency	Average	Standard deviation	“T”	Sig. Level
Male	28	2.109	0.22	0.394	0.694
Female	72	2.132	0.283		

This table presents that the value of the significance level is (0.694) which means that the sig is greater than $\alpha = 0.05$, so there are no statistically significant differences among the mental health averages according to gender variable.

The second hypothesis is “**There are no statistically significant differences among mental health averages attributed to the marital status variable**”. The researcher calculated the mean and standard deviation and used the (T.test) test according to the marital status variable, as shown in the following Table 14.

The value of significance level (0.957) sig is greater than $\alpha = 0.05$, as it is clear that there are no statistically significant differences among mental health averages according to the variable of marital status.

The third hypothesis is “**There are no statistically significant differences among mental health averages attributed to the variable Number of Hours of Using Social**

Table 14. The average responses according to the marital status variable

Marital status	Frequency	Average	Standard deviation	“T”	Sig. Level
Single	79	2.125	0.279	0.054	0.957
Married	21	2.128	0.212		

Media”. The researchers calculated the mean and standard deviation and used the One-Way ANOVA test according to the variable number of hours of using social media, as displayed in the following Table 15:

Table 15. The One-Way ANOVA analysis according to the variable Number of Hours.

Variance Source	Sum Squares	Degrees of Freedom	Mean Squares	F. value	Sig. Level
Between groups	0.401	3	0.134	1.95	0.127
within groups	6.589	96	0.069		
Total	6.99	99			

As seen in the Table 15, the value of the significance level (0.127) sig is greater than $\alpha = 0.05$ which indicates that there are no statistically significant differences among the averages of mental health according to the variable number of hours of using social media.

4 Conclusion

The study revealed the level of addiction to social media websites and its relationship to the mental health of the university students in the Gaza Strip according to gender, marital status, number of hours in using social media. The results showed that there are statistically significant differences in the level of addiction to social media websites and the level of mental health attributed to the study variables.

5 Recommendations and Suggestions for Further Research

This research is limited by tackling two main universities namely; Al-Aqsa University and UCAS, as it was also limited to a sample of (100) students. In light of the limitations and results, the researchers suggest the following:

- Providing psychological support to university students through student guidance centers in universities so that students overcome psychological pressures.
- Raising the students’ awareness on how to use social media and immunizing them from slipping into the dangers of lying and deception.
- Raising the awareness of the families to follow up on their children in terms of the uses and contents of social media.
- Emphasizing the negative impact of social media website addiction on the mental health of individuals through all the possible channels.
- Conducting similar research on other samples from the other universities of Gaza to tackle more variables and larger samples.

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The Impact of 5S on the Production Planning Minimum Order Quantity (MOQ)

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Abstract. Nowadays, the competition between the FMCGs (Fast Moving Consumer Goods) organizations is at its peak. One of the main factors in which an organization could gain or maintain its market share is being agile and flexible in response to the market needs for specific SKUs (Stock Keeping Unit). By being more resilient to the market demand, the supply side (production representing manufacturing) will produce the required SKUs in terms of the variety of the SKUs or quantities ordered by the demand side (marketing representing supply chain). Focusing on the supply side, the operation department always prefers to maintain the production line stable by producing the same product for the longest time. Supporting the production lines running the same product will reduce the operation wastes, which eventually guarantees to deliver the contracted production KPIs such as non-value-added percentage, low level of wastes, efficiency, productivities, and product quality. When both demand and supply sides agree on the production plan, demand seeks a mix of SKUs with low quantities.

On the other hand, the supply side demands a higher amount with a minimum combination of SKUs. This study will explore the impact of the 5S methodology implementation in the supply side on the MOQ (Minimum Order Quantity). The methodology will help solve such conflicts and build a dynamic collaboration between the demand and supply sides, generating the lowest possible MOQ. The 8s will focus on production activities to reduce the waste and ensure delivering the agreed KPI's.

Keywords: Minimum Order Quantity · Fast Moving Consumer Goods · Supply chain · Stock Keeping Unit

1 Introduction

The strategy of doing business in the 21st century mostly rely on marketing relationship. One of the main drivers for the market is maintaining marketing relationships with customers. These days, doing business is heavily dependent on the end-user's and customers' demands. As a result, the business growth is subjected to the quality of the goods and functional relationship-improving to achieve the customers' requirements and gain a

competitive advantage. The competition in the FMCG (Fast Moving Consumer Goods) market reaches the highest level nowadays.

One of the CRM (Customer Relationship Management) elements is relationship marketing, targeting a customer's relationship instead of short time targets like single sales and customer acquisition. Developing strong, even some emotional, relations with customers in a specific brand or SKU (Stock Keeping Unit) is the prime motive of the relationship marketing to an ongoing business. The main focus is on improving single sales performance with the more classical transaction business approach. With this in mind, it can be considered that customer relationship marketing plays a critical role in leading the overall performance of any firm. One of the most challenging and expensive tasks a business will face is acquiring new customers for a specific product.

The FMCGs are the products that sell fast at a relatively low cost. The profit of these single products is lacking; however, the sales are in massive quantities. The high competitions in the FMCG market are based on identifying and meeting the customer's needs with high quality and, in a short time, providing a satisfying experience to the customers. Firms focus on building a close connection with customers and developing long-lasting rapport (Rai 2018).

To develop such a relationship with a customer, the companies must ensure product availability in the market all the time. And this will be possible only if their factories were able to produce the required quantity on time and meet customer's quality expectations. One of the customer's expectations is having more products, which can be advantageous for an organization to remain competitive solid as per a case study done by Mussche (2019).

As per the manufacturing-based approach definition of quality, the manufacturing environment focuses on increasing efficiency, profits, and incomes through cost reduction (Garvin 1986). Offering a mix of products to meet customer expectations will result in a low demand, which means multiple changeovers in the manufacturing side, primarily if the products are produced in a shared resource or technology. Considering the manufacturing-based definition of quality, manufacturing demands a high minimum order quantity (MOQ) or batch size to maintain high performance. Essentially, a low-demand product will be produced if it's lower than the agreed MOQ. And this will ensure maintaining the customer relationship, but on the other hand, it'll introduce different types of wastes impacting the manufacturing performance. The debris could be in the forms of time and materials scraps or rework in terms of changeovers, and inventory in terms of overproduction along with the required product demand quantity as shared by Mussche (2019).

This case study will explore how a lean manufacturing tool can play a crucial role in facilitating the MOQ limit to support both businesses' ends. The aim is to provide the market with the demanded quantity of products to maintain a positive customer relationship. And on the manufacturing side is to be efficient enough to deal with low demand and a wide variety of products and, at the same time meet the main manufacturing KPI's such as production cost, on-time product delivery, and other operation-related KPIs. Such performance will ensure a win-win situation.

2 Literature

Different corporations have adopted the 5S practices in various businesses such as FMCGs corporations, services providers, health care sectors, governmental institutes, and many others with different sizes and nature as per the below studies. The implementation of 5S aimed to gain competitive advantages and improve the workplace by eliminating waste and organizing the workplace, which will enhance productivity and efficiency to provide better products and services. MOQ is a common practice imposed by the manufacturer. When one browses through various e-commerce business-to-business sourcing portals on the Internet, such as alibaba.com and globalsources.com, it is not difficult to find that many manufacturers state their MOQ requirements together with their product information. Like the other forms of quantity commitments, MOQ helps the manufacturer to “reduce the uncertainty during the ordering process” and “ensure markets”. Using the principle of economy of scale, MOQ can also justify the production setup cost of the manufacturer and guarantee its income to be at a certain level. However, the retailer generally does not welcome MOQ as it restricts its ordering flexibility.

In his article, Ahuja (2017) mentioned that Japanese industries developed the 5S concept and introduced it to the world at the end of the 1960s. The method was developed to understand and apply by Osada 1991 followed by Hirano 1995. Toyota Motor Corporation started implementing 5S in its production system, which they call the Toyota Production System (TPS). The meant objectives of the 5S were to clean, organize, standardize and maintain discipline at the workplace to achieve sustainable improvements in efficiency, cost optimization, productivity, and waste reduction in an organization. The article explained the 5S meaning and its objective. The first S is Sort (Seiri), which focuses on sorting out the items and keeping the necessary things in their appropriate places. Set in Order (Seiton) is the second S meant to develop an economical and efficient workspace with organized and orderly storage of the tools and goods. It creates the proper storage per the priorities and important use of the goods to maximize location. Third S is Shine (Seiso), and it means cleaning the tools, goods, and the workplace as it emphasizes self-inspection. It also includes three primary activities: getting the workplace clean, maintaining its appearance, and using preventive measures to keep it clean. And by cleaning mean eliminating and removing dirt, debris, and fluids.

Standardize (Shitsuke) is the fourth S. It maintains the workplace in the same condition after the previous Ss. Hence, it becomes productive and comfortable by repeating the sort, set in order, and shine. In this phase, the team will be developing a standard to establish a standard operating procedure to improve workplace practice. Sustain (Shitsuke) is the last S in the 5S method, and it means sustaining all the previous Ss, which require self-discipline by all employees at all levels. It is crucial to understand and implement as it requires a change in the employee’s behavior to adapt to the new way of working.

Omogbai and Saloniitis (2017) explained in their case study that sometimes, manufacturing organizations need to see how a particular project will benefit the organization before deciding to proceed with the implementation. A system dynamics (SD) model shall perfectly mimic the actual outcomes when the project is about understanding the effect of implementing or improving the 5s program on the current throughput; a system dynamics (SD) model shall perfectly mimic the actual outcomes. It is a methodology

that measures the cause and effect relationship in a system; in this case, it's a manufacturing system. The simulation can give a clear idea of how the system will behave after implementation. In many manufacturing organizations with particular operation models such as make-to-order, in this case, variation of the demands is a key to the throughput. With the low market, the throughput is high.

On the other hand, with increased demand seasons, the organization struggles to meet the due dates with the customers as the throughput is not at the expected level. As per this case study, the low level of 5S practices is one of the main factors causing this firefighting situation. Although 5S is implemented, yet still considered inefficient to meet the customer requirements on time. In the high-demand season, the changeover and breakdowns are repeatedly occurring. During this case study, the operators are taking extra time in completing the modification or fixing a breakdown as they spend more time searching for the required tools for the job. The researchers highlighted that 5s is a tool that reduces the non-value adding time, increases productivity, and improves overhaul quality. The 5S methodology was reintroduced after an in-depth investigation of the weak area and understanding its struggles with the current setup. The SD model results showed a direct link between improving the 5S practices and the manufacturing system performance. The improvement has also been noticed in time setup and repairing activities.

In conclusion, the benefit is a multi-dimensional improvement beyond the target. They found that by decreasing the sorting time by 30%, the throughput rose by 6% from 24.05 to 25.49 completed orders a day. Therefore, it was an eye-opener for the leadership team, who was encouraged to adopt the methodology to improve another lean aspect using the SD moulding technique. However, the study did not highlight how the order quantity impacted as productivity increased with all the gained benefits.

Bin Ashraf et al. (2017) studied R5 Food & Beverage Ltd, a recent and newly established firm considered FMCG manufacturing firm. It is a small size organization with about 20 employees. The private company started its production in February 2016, producing different food and beverage items such as juice, lollipop, and water glass. In its early life, the researchers noticed that the firm faced a challenge in its operation. Some of the problems are machine performance, space availability, shop floor employees' productivity, hygienic cleanliness of the factory, etc. With all of these challenges, the researchers found a lack of a systematic approach to managing the operation to overcome these problems. Upon applying the 5s methodology, improvements in the operation were observed with every 5S step. The researchers saved 310.1 square feet with the sorting step, which resulted in a saving cost of \$440.82 US. And after the set-in order step, the flow distance reduced from 2450.65 ft. to 1686.8 ft. After the full implementation of 5S, the productivity increased by 38.65%, and the product rejection reduced by 6.1%. The study did not consider how adapting to the 5s methodology improved the operation flexibility with the demand requirements. Dixit et al. (2019) discussed in their case study one of the critical members of India's generic drug distribution centres is Government Support Drug Warehouse (GSDW). Different types of medical supplies, including generic drugs, gloves, sutures, syringes, etc. being managed and supplied by GSDW to other health care centres for consumption. Considering the importance of providing accurate and on-time required supplies to the customers, the GSDW should maintain a specific

efficiency and productivity in the warehouses' regular operation. GSDW is also responsible for maintaining smooth and uninterrupted medical supplies to avoid shortages in the healthcare centre. The study highlighted unscientific housekeeping processes and a different level of waste, such as low space utilization, unnecessary movements, and other shoddy practices that could impact the work quality and efficiency. Upon implementing the 5S methodology in the GSDW facility, the researchers concluded that the ultimate goal of improving the working environments was achieved. The improvement was evident in operational efficiency, customer satisfaction, and responsiveness. Although the study highlighted improved productivity by above 38%, the impact on the minimum order quantity was not measured.

Leming-Lee et al. (2018) mentioned in this case study as per the Institute of Medicine's (IOM) report, at least 44,000 Americans die annually due to a medical error. And a total of \$17 to 29 billion are estimated a preventable cost which health care represents over half. About 40 to 50 per cent of the hospital medical errors occur in the operation room (OR) as per the estimation. Further, surgical site infections (SSIs) are considered one type of these repetitive errors. The impacts of the SSIs are increasing the patient's stay reduce the quality of life and death. Out of the total surgeries, 2.7% result in SSIs. Frequent contribution factors of SSIs in the OR errors are distraction and interruption.

The case study found unnecessary foot traffic during the OR's surgical process workflow, creating distraction and interruption. This case study found that mainly, the foot traffic searched for medication, supplies, and medical tools and equipment by the OR neurosurgical team. Upon confirming the unnecessary foot traffic by a thin spaghetti diagramming exercise, there are many steps, and motion would be eliminated by implementing the 5s methodology. The main aim of the quality improvement tools implementation was to decrease the infection from 9.0 per 100 cases to 4.4 per 100 cases. The 5s project team and the OR management team targeted the equipment, supplies, space, and OR foot traffic to be solved by the 5s practices. As a result, the infection varied between 1.7 to 6.9 per 100 procedures compared to 9.0 per 100 procedures. Another benefit was a significant reduction in the inventory cost from \$460,530 to \$147,363.62 and a 68% reduction in inventory. And this results in eliminating two large inventory carts, creating extra space in the OR. Although the overall four main goals of implementing the 5S methodology are met, improving the number of operations per period is not measured.

Sembiring et al. (2018) discussed in their article that in PT XYZ, they produce fresh fruit bunches (FFB) to crude palm oil (CPO) and palm kernel oil (PKO). The manufacturing process consists of six different working stations. The company suffers from the absence of scheduling engine maintenance, which impacts the smooth operation of the manufacturing process. It was also noticed that the environment in one of the workstations is less convenient for operators as there are some new machines and equipment, slippery and muddy floors, scattered fibres, incomplete use of PPE, and lack of employee discipline. The study suggested that the company's management team apply the 5S method to improve workers' discipline and create a safe and comfortable working environment. It is also expected to increase work productivity and avoid accidents. For implementing the 5S method at PT XYZ, the study's approach focused on top management involvement initiatives to provide resources to support the different

implementation phases, strategy and mission statement communication, and another directional strategy. And employee involvement initiatives in terms of 5S training, other quality tools and methods, and motivating them to actively participate in continuous improvement initiatives. The ultimate goal of improving the work environment was reached after implementing the 5S method. The new machines are transferred from the operation area, grouping goods based on their use, developing a cleaning procedure for the production area, conducting a planned inspection for the PPE use. As the primary goal of 5S implementation is achieved, the impact on the minimum order quantity could also be discussed due to better productivity.

Yik and Chin (2019) recalled that inventory is considered one of the eight waste in lean. Production efficiency and process capability can be assessed through its inventory level. Other issues the insufficient inventory management cause is an inadequate response to customer demand and hiding production problems. The article explained the basic inventory categorization of raw materials, Work in Progress (WIP), finished goods, and safety stock. In this case study, a company that manufactures ferrite in a make-to-order operation model was selected. It takes 6.5 days for the storekeeper to complete a shipment. Twenty wooden crates are needed for weekly shipment as per the average demand. The case study found that three-fourths of the shipments are affected due to the shipment postponement to the following week because of the insufficient pack to store quantity regularly.

The current shipment preparation process consists of twelve steps contributing 3.58 h. Some of the causes related to the issue are unorganized inventory and lack of visibility. The selected products are being stored in a location without clear identification. As a result, the storekeeper spends an average of 40 min searching and retrieving products during shipment preparation. Implementing the 5S methodology significantly reduces shipment preparation time from 3.58 h to 1.83 h. And the number of activities reduced from twelve to eight steps only. As the shipment preparation improved, the storekeeper became more productive and efficient in carrying out other than the redundancy tasks. 5S practices allow the system inefficiencies to be categorized and assessed separately. And the waste (inventory) is within the limit. As the inventory waste is reduced via implementing the 5S methodology, the response to the customer demand is increased; therefore, the impact on the minimum order quantity could be measured.

Kanamori et al. (2016) shared that a Japanese manufacturing enterprise initially developed the 5S methodology. Although it was initially been introduced to the West's manufacturing sector, it was also adopted by the health sector to organize and standardize the workplace. As government healthcare organizations in some low and middle-income countries are focusing on improving healthcare services, they consider implementing a 5S method. This study highlighted other studies that showed the application of 5S in primary health care facilities and hospitals in many countries. They also consider it as starting point for health care services quality improvements. The main focus areas that improved due to the 5S application were safety, efficiency, and patient-centeredness. Besides, it was already adopted by several country's governments as a quality improvement strategy method. Upon reviewing the empirical studies in the literature, this study concluded the 5S could be implemented in any health care facility regardless of the location. The policymakers can adopt it. Some of the 5S benefits were shared in this

case study, such as; a potential reduction of more than 45% in the drug-dispensing cycle time, 70% reduction in the number of instruments used in a specific type of surgery, 37% decrease in setup times, and potential institutional annual cost saving of US\$ 2.8 million. In terms of safety improvements, there was a reduction of 52% in infection and a 33% reduction in the stillbirth rate over the 2-years period. Another improvement shared by the study was assessing patient-centeredness measures based on the time spent on direct patient care increased from 30 to 61% after 30 days. 5S is lower than many other quality improvement tools in terms of cost, making it more attractive to adopt low and middle-income countries and resource-constrained healthcare facilities as a starting point toward quality improvement. As the surgery setup time is reduced, the number of instruments used in operation is reduced, resulting in a reduction in the operation time. And this will open the opportunity to serve more patients in a period. In FMCG terminology, this can be seen as increasing the serving order quantity. The study could discuss this factor too.

Arifin and Charisma (2018) developed a material procurement model in their case study considering the two factors: minimum order quantity. The model is meant to help an aerospace company to manage its inventory. What made this an issue for the company is the type and number of demands vary greatly, lead time order, minimum order quantity from the vendor, and other characteristics. Such issues make it difficult for the planning department to order the perfect amount of materials. The optimum material order interval can be 100 per cent achieved with a condition of a relatively small amount of MOQ. The case study did not highlight what impacted the MOQ.

In their case study, Shenoy and Zhao (2019) discussed how the sponsoring company wants to review a product segment's raw material ordering and production plan. As the product's demand is unstable, the company was ordering materials worth one month of production. The supplier offers a good deal of discount with large quantity orders. Such an offer will benefit the company in terms of cost. This case study developed a model that can provide an optimal minimum order quantity (MOQ). Although the developed model did not support the researchers' hypothesis of optimizing the raw material order by incorporating high or low MOQ value switching rules, they discovered another critical insight. Implementing the 5S methodology can be a tremendous key factor that will impact the MOQ and the overall holding cost, which can be explored.

Mussche (2019) investigated the impact of batch sizes (in other words, order quantity) on the adequate production capacity using a shared resource for the production. The case study confirmed a significant impact on the adequate production capacity caused by the batch size. The study focused on the product demand, product variety, and the shared resource to conclude the final result. The study did not mention or explore how the batch size could be optimized to introduce another level of flexibility on the shared resources. In this case, it could be the 5S methodology.

2.1 Problem Statement

The demand planning specialist meets the production planning specialist to confirm and agree on the production plan for the next period (weekly or monthly). This meeting is called a handshake meeting. The discussion covers the number, types, and quantity of SKUs requested from the market team. The conflict usually is on the number of SKUs. The demand side prefers the quantity as low as possible as it gives them high flexibility to respond to market demand with the precise quantities of SKUs. This quick response is considered one of the factors that help in gaining market share.

On the other hand, production always seeks and demands a large quantity of a single SKU before changing over to another. The frequent changeovers between SKU's negatively impact the production line's efficiency and the overall performance. Frequent changeover introduces several types of waste such as material waste in the form of scrap, over-processing in rework, wetting time till the changeover is done, and non-value adding activities in terms of the changeover itself. This paper will explore the impact of the 5s on reducing the MOQ as low as possible through improving the production changeovers between SKUs.

3 Methodology and Analysis

3.1 Methodology – Lean Manufacturing 5S

Lean manufacturing is a set of five key elements that rely and depend on each other to create value. Every element is a must to have for the successful implementation of a lean manufacturing program. In other words, implementing only one element out of the five will not drive the performance level as the five elements all together.

Every element includes a list of lean principles. These principles work together to develop a world-class manufacturing environment that can be measured by a company's inventory-turn level equal to 50 or higher. In addition, also there is a fundamental relationship between these principles when it comes to the deployment sequence.

The first element is manufacturing flow, which focuses on the design standard and physical changes implemented as part of the working area. The organization is the second element, and it is all about identifying people's roles and responsibilities, communications, and training on new ways of working. The third element is process control which focuses on controlling, stabilizing, monitoring and exploring ways to improve the process. Metrics is the fourth element, and it's directed at visible and results-based performance measures, rewarding and recognizing teams, and improving the targets. The last element is logistics, which defines operation mechanisms and rules for controlling and planning the material flow.

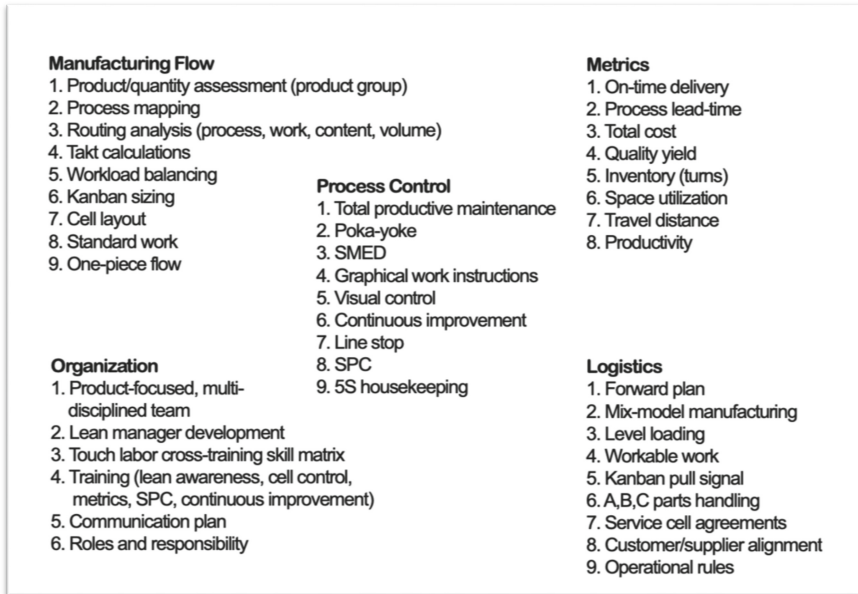


Fig. 1. Five primary elements of lean manufacturing

Figure 1 illustrates all the lean practices related to each primary element. With such categorization, one of these primary elements will address all the issues, problems, and challenges that would arise while implementing lean manufacturing (Feld 2001).

This research will focus on the process control key element, more specifically on the 5S principle.

3.2 The Current MOQ - Before 5S Program Implementation

The current limits of the MOQ are agreed upon and signed off between demand and manufacturing. The demand department is aiming for a lower limit of the MOQ as the current demand volumes from markets are becoming lower due to competition strategies. Demand is also looking to ensure product availability with the exact quantity in the market. This means a frequent and continuous market fills up even before the product gets out of stock. With such a sales and marketing operating model, it's investable to order lower quantities to be produced at a specific time. This will ensure the supplying the market with required products quantities and the freshness of the products.

On the other hand, the production department faces challenges with lower quantities as it increases the operation wastes. It's also impacted the production line's efficiency as the line will be running for a shorter time before it gets disturbed with product changeovers.

The below analysis will focus on the manufacturing side. As explained above, different factors impact the MOQ, such as changeovers, human resources, equipment and tools, machine efficiency, production area design. The 5S methodology will be used to

focus on the changeovers and consider the other neutrals. To explore the effect of the 5S, the implementation will be on a pilot production line that produces several SKUs.

The current agreed MOQ between the demand and production department on the products produced on L1 (Production Line 1) is below (Table 1).

Table 1. MOQ limits before the 5S project implementation

MOQ limits before 5s project				
Product	Line	Variant	Description	MOQ
1	L1	Milk - MP	Milk - MP 36 g × (4 + 1) pk × 24	10,000
2	L1	Milk - MP	Milk - MP 36 g × 5pk × 24	10,000
3	L1	Milk	Milk 18 g × 24 × 12	4,600
4	L1	Milk	Milk 18 g × (24 + 2) × 12	4,600
5	L1	Milk	Milk 36 g × 24 × 6	10,000
6	L1	Milk	Milk 36 g × (24 + 4) × 6	10,000
7	L1	Milk	Milk 80 g × 12 × 6	6,000
8	L1	Hazelnut	Hazelnut 36 g × 24 × 6	5,000
9	L1	F&N	Fruit & Nut 36 g × 24 × 6	2,000
10	L1	Crispy	Crispy 16 g × 45 × 8	5,000
11	L1	Crispy	Crispy 36 g × 24 × 6	5,000
12	L1	Caramel	Caramel Single 20 g × 45 × 6	12,000
13	L1	Mini - Choco	Choc Mini 150 g(12 pc) × 12	–
14	L1	Mini - Choco	Choc Mini 225 g × 12	–
15	L1	Mini - Hazelnut	Hazelnut Mini 150 g(12 pc) × 12	–
16	L1	Mini - Hazelnut	Hazelnut Mini 225 g × 12	–
17	L1	Brittle	Orange Brittle 36 g × 24 × 6	–
18	L1	Brittle	Coconut Brittle 36 g × 24 × 6	–

Some SKUs don't have MOQ as they are considered seasonal products or promotions. This means the production of these products throughout the year is limited for a few runs. There are also the essential products that are frequently on demand; hence the MOQ limit for those SKUs is 10,000 cases or above.

The changeover matrix was developed based on different factors, such as using the same resources and tools to produce the product, preparation of the tools and materials (raw and packaging materials), the speed of the production line, and some other factors related to the materials specifications. The below table is a summary of the current changeovers time (Table 2).

Table 2. Changeover matrix before the 5S project

Change over matrix in minutes												
Matrix		To										
		Milk 36 g	Milk 12.5 g	Milk 18 g	Milk 80 g	Crispy 16 g	Crispy 36 g	HN 36 g	HN 12.5 g	HN 90 g	FN 40 g	Caramel 20 g
From	Milk 36 g		90	45	45	45	45	45	60	45	45	120
	Milk 12.5 g	90		90	90	90	90	60	45	60	60	480
	Milk 18 g	45	90		45	45	45	45	60	45	45	120
	Milk 80 g	45	90	45		45	45	45	60	45	45	120
	Crispy 16 g	180	180	180	180		45	120	120	120	120	480
	Crispy 36 g	180	180	180	180	45		120	120	120	120	480
	HN 36 g	120	120	120	120	120	120		90	90	45	120
	HN 12.5 g	120	120	120	120	120	120	90		90	90	120
	HN 90 g	120	120	120	120	120	120	90	120		90	120
	FN 40 g	120	120	120	120	120	120	480	120	120		120
	Caramel 20 g	120	480	120	120	240	240	60	60	60	60	

There are four SKUs equal to or greater than 10,000 cases as MOQ limit, and those are the key variants in the production line L1. The high limit of the MOQ came from the fact that the changeovers for these products is time-consuming and require effort and energy.

3.3 5S Implementation Steps

The 5S implementation plan was developed specifically to improve the changeover time. With this in mind, a special training session was delivered to the L1 production line's operators. The training covered the aim of the 5S program, introduction to lean manufacturing, and 5S methodology. Before the implementation start, a workshop has been conducted with the operation team where the tasks, activities, steps, and resources (people, tools, and materials) related to operating the equipment and changeovers are quantified. This is followed by brainstorming on the quick wins the team can gain before the 5S implementation. Below are the details on the implementation steps.

3.3.1 Sort

The team identified the common and uncommon resources required in each changeover in the sorting exercise. And building on the brainstorming workshop, the team managed to identify some materials that should be removed from the working area. Those materials are confusing the changeover activity as it either block the needed tools or is mistakenly used by the operator, which causes a waste of time in terms of rework. It also increases the searching time for tools.

As a result of the sorting exercise, the team labelled all the changeable resources with a specific product name and labelled the standard tools, parts, and materials in the area.

3.3.2 Set in Order

In the second stage, the team identified a space away from the production line to store the resources. The new storing area is divided and marked with specific products to match the labels on the resources. And another space near the production line is identified and labeled as the following activity resources. This area is designed to be empty all the time. The following product's plan required resources will be moved to this area before the changeover by 24 h.

Shadow-boards were designed and fixed beside the production line for some of the standard tools used frequently. With a quick and straightforward look into the board, the operator will notice if any crucial tools are missing and need to search for them or not before the actual changeover start.

3.3.3 Shine

Following the clean as you go policy, the new operating standard in the area is all the used items should be cleaned within eight hours after the changeover is completed and before moving it to the dedicated storing area. A step of the changeover is cleaning some parts before installing them in the machine. This cleaning activity is time-consuming, which impacts the overall changeover time. With this new cleaning standard (Shine), the cleaning activity during the changeover is either eliminated or reduced to a neglectable time compared to previous changeover steps.

3.3.4 Standardization

With the new changes introduced in changeovers steps, all the related Standard Operating Procedures (SOP) are revised and updated as per the agreed steps. In some cases, new One Point Lessons (OPL) are developed to share key learnings and insights with the other operators in the different shifts. The area supervisors and the area owner reviewed all the updated SOPs and OPLs and validated them. The final document versions are shared with all operators in the area and aligned with the supporting functions such as Quality and Food Safety (Q&FS).

3.3.5 Sustain

An audit plan is developed to ensure the new SOP is followed to sustain the new operating standard. The audit activity is performed twice a week linked with the changeover time per the weekly production plan. Occasionally, a specific changeover is targeted due to some findings or to observe an improvement opportunity. The audit frequency will be reduced to once per week once the results are reduced to an acceptable level. The 5S project team reviews the findings monthly and develops solutions to close the gaps in collaboration with the area operators. This exercise is considered a continuous

improvement for the project. The new solution will be shared face-to-face and in a communication event with the area operators.

3.4 The New MOQ - After 5S Program Implementation

After all elements of the 5S methodology were implemented, the project team started to measure the change over time. The focus was on changeovers either to Milk SKUs or Caramel. The reason is Milk SKUs are the most frequently demanded, and it has one of the highest MOQ. And changeover to Caramel has the highest changeover time and highest MOQs. The changeover from FN to HZ 36 g was deprioritized in this study as it is one of the rare changeovers. To ensure measuring the actual effect of 5S on changeovers, repeatability of changeovers by the same team and reproducibility of the changeover steps between shifts were considered. The Measuring was conducted for four teams, three times each, except one group measured only once due to the production scheduling interval.

Table 3. Changeover matrix after the 5S project

Change over matrix in minutes after the 5S project												
Matrix		To										
		Milk 36 g	Milk 12.5 g	Milk 18 g	Milk 80 g	Crispy 16 g	Crispy 36 g	HN 36 g	HN 12.5 g	HN 90 g	FN 40 g	Caramel 20 g
From	Milk 36 g		90	45	45	45	45	45	60	45	45	120
	Milk 12.5 g	90		90	90	90	90	60	45	60	60	436
	Milk 18 g	45	90		45	45	45	45	60	45	45	120
	Milk 80 g	45	90	45		45	45	45	60	45	45	120
	Crispy 16 g	160	160	160	160		45	120	120	120	120	436
	Crispy 36 g	160	160	160	160	45		120	120	120	120	436
	HN 36 g	108	108	108	108	120	120		90	90	45	120
	HN 12.5 g	108	108	108	108	120	120	90		90	90	120
	HN 80 g	108	108	108	108	120	120	90	120		90	120
	FN 36 g	108	108	108	108	120	120	480	120	120		120
	Caramel 20 g	120	480	120	120	240	240	60	60	60	60	

It's noticeable in the Table 3 the reduction in the changeover time to Milk and Caramel. Below is the average reduction time in minutes:

- The changeover from Milk or Crispy to Caramel: 44 min (9%)
- Changeovers from Crispy to Milk: 20 min (11%)
- Changeovers from HN and FN to Milk: 12 min (10%)

The production MOQ formula = (TOC * Lights ON time)/60.

TOC stands for Theoretical Operating Capacity. And Light ON time is the summation of an agreed list of activities to produce a product. It includes production time, changeovers between products, breakdowns until rectified, planned maintenance, hygienic cleaning, startups and shutdowns, any learning curve, and other activities (Fig. 2).

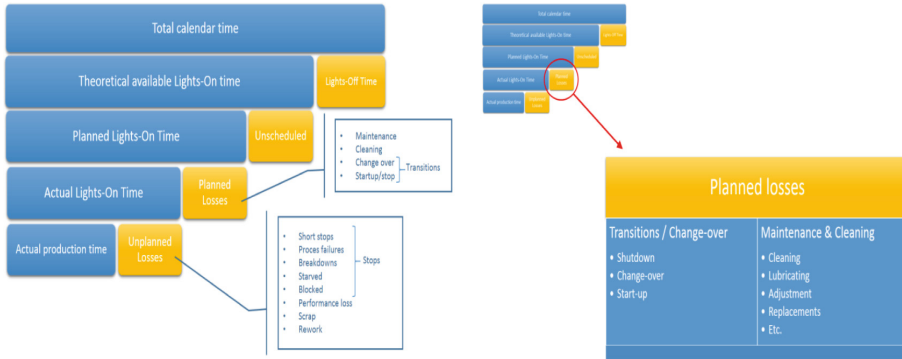


Fig. 2. Light-ON and Light-OFF.

Table 4. MOQ limits after the 5S project implementation.

New MOQ after 5s project				
Product	Line	Variant	Description	MOQ
1	L1	Milk - MP	Milk 36 g × (4 + 1) pk × 24	9,440
2	L1	Milk - MP	Milk 36 g × 5 pk × 24	9,440
3	L1	Milk	Milk 18 g × 24 × 12	4,379
4	L1	Milk	Milk 18 g × (24 + 2) × 12	4,379
5	L1	Milk	Milk 36 g × 24 × 6	9,520
6	L1	Milk	Milk 36 g × (24 + 4) × 6	9,520
7	L1	Milk	Milk 80 g × 12 × 6	5,664
8	L1	Hazelnut	Hazelnut 36 g × 24 × 6	5,000
9	L1	F&N	Fruit & Nut 36 g × 24 × 6	2,000
10	L1	Crispy	Crispy 16 g × 45 × 8	5,000
11	L1	Crispy	Crispy 36 g × 24 × 6	5,000
12	L1	Caramel	Caramel Single 20 g × 45 × 6	11,045
13	L1	Mini - Choco	Choc Mini 150 g(12 pc) × 12	–

(continued)

Table 4 reflects the new MOQ after reducing the changeover time, considered essential in the Light ON time.

Table 4. (continued)

New MOQ after 5s project				
Product	Line	Variant	Description	MOQ
14	L1	Mini - Choco	Choc Mini 225 g × 12	–
15	L1	Mini - Hazelnut	Hlznt Mini 150 g(12 pc) × 12	–
16	L1	Mini - Hazelnut	Hazelnut Mini 225 g × 12	–
17	L1	Brittle	Orange Brittle 36 g × 24 × 6	–
18	L1	Brittle	Coconut Brittle 36 g × 24 × 6	–

The table and graph below directly compare and illustrate old and new MOQ after reducing the changeover times on the selected products (Table 5 and Fig. 3).

Table 5. Old and new MOQ limits comparison.

Product	Line	Variant	Description	MOQ	New MOQ	Changes %
1	L1	Milk - MP	Milk -MP 36 g × (4 + 1) pk × 24	10,000	9,440	6
2	L1	Milk - MP	Milk- MP 36 g × 5 pk × 24	10,000	9,440	6
3	L1	Milk	Milk 18 g × 24 × 12	4,600	4,379	5
4	L1	Milk	Milk 18 g × (24 + 2) × 12	4,600	4,379	5
5	L1	Milk	Milk 36 g × 24 × 6	10,000	9,520	5
6	L1	Milk	Milk 36 g × (24 + 4) × 6	10,000	9,520	5
7	L1	Milk	Milk 80 g × 12 × 6	6,000	5,664	6
12	L1	Caramel	Caramel Single 20 g × 45 × 6	12,000	11,045	8



Fig. 3. Graphically represented the Actual reduction in the MOQ.

The above graph visualizes the MOQ reduction on the selected products after implementing the 5S project in production line-1.

4 Conclusion

As the demand and production planning from the supply chain department are facing challenges to maintain the availability of their products in the market, manufacture.

The implementation of the 5S program was eye-opening for several issues related to the production activities. Focusing on the project’s aim, there were different challenges in operators understanding the 5S steps, availability of spare parts, and other heavy activities related to other projects—those challenges impacted following the agreed procedures. Yet, the team manages to benefit from the program in different KPIs and, most specifically, on the changeover time.

The MOQ is linked with available production time, directly impacting changeover times and other factors listed above. There was a reduction after implementing the 5S project and measuring the changeovers aligned with the six-sigma methodology of repeatability and reproducibility. As the elements of the changeovers varied between products, the amount of time reduced is also varied. For example, in the case of the changeover to Caramel, the reduced time was 44 min, and changeovers from inclusion products HN and FN to Milk were 12 min only. With these differences in the saved times, there was a positive impact on the MOQ of the same products. Milk different variant products reduced by 5–6% and Caramel reduced by 8% from the original MOQ. This will conclude the 5S methodology can impact the MOQ limits. With such an impact, the marketing department will have better flexibility in ensuring product availability on the market shelves most of the time.

5 Future Work

Considering the sensitivity of the FMCG business nowadays, companies must ensure a healthy relationship with their customers. Otherwise, competitors will enjoy growing their market share by gaining more customers. Product availability will help maintain this relationship, which is impacted by the 5S methodology discussed above. As a continuous improvement, the 5S program should be carried on the other production line and review all the MOQs.

The other KPI, such as ATS (Adherence to Schedules), NQC (Non-Quality Cost), and Productivity, could benefit from the 5S program; therefore, another study shall be conducted and updated the targets. The 5S methodology could be upgraded to the recent 8S or 9S. The newer version considered other elements such as Safety or Support from management, which might add value to the ultimate time reduction goal. Therefore, the MOQ might have further improvement.

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The Importance of Digital Marketing in Building Brand Loyalty

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Abstract. Digital marketing is a module of marketing that is used to promote an organisation's products and services through the use of the internet and digital technologies. Brand loyalty is a positive feeling of consumers that dedicates them to purchase specific products or services. This study aims to identify the importance of digital marketing in building brand loyalty in the digital era. The results of this study indicate that building brand loyalty depends primarily on trust. The decision of customers to purchase a product may be made consciously or unconsciously, as it arises from an emotional engagement between consumers and the brand, based on their confidence that the brand will meet their needs. The results also reveal the importance of the customer's perception of the quality and value of a particular product compared to its competitors. This adds a competitive advantage to a particular brand, which is a set of consumer feelings and feelings about the benefit and quality of a particular product.

Keywords: Digital marketing · Brand loyalty · Quality

1 Introduction

Among other things, building a brand requires establishing a strong connection with end users [3]. But in order to establish a connection with someone, it is important to know where to start [17]. With more than 4.66 billion people actively using the internet worldwide, it has become imperative for businesses to promote their products and services on digital platforms [7]. Thus, digital marketing has become a necessity nowadays [8]. If you are aiming to build a brand, there is no way you can do without using modern marketing techniques to assist in the brand building process [1].

Organisations use social networking sites for the purpose of republishing their TV advertisements [5], in addition to producing videos, advertising campaigns and advertising programmes for publication specifically on their YouTube channels. They also publish other promotional videos, such as their TV interviews and some of their sponsorship activities, for the purpose of providing information about the goods or services they provide [4]. Serving multiple purposes, these videos explain how to use products or

services, consolidate a brand, activate its sales by offering promotions and competitions, and remind audiences of its name, brand and promotions [2].

Some organisations fail to take advantage of the marketing and interactive benefits offered by their sites [7]. The results showed that the organisations were not interested in activating some of the interactive sections provided by their sites, such as the discussion board and the dialogue communities between the admin and the community [11]. These sections appeared in name only without activation from the organisation, not caring to respond to any inquiries they received from customers, while others left them entirely blank [12].

Brands have an economic importance that lies in their ability to convey various information about the products offered in the market, to familiarise the consumer with them and to increase the profits of producers through their ability to control prices [7]. Selling is what makes the maximum profit possible [3].

A distinction must be made between brand counterfeiting and brand infringement [4]. Brand counterfeiting means imitation of the original brand and the imitated brand, while brand infringement reflects the attempt to imitate the brand, but there remains a difference between the original brand and the counterfeit brand [2].

Brand counterfeiting aims primarily to deceive the consumer by convincing them that the products they seek to buy are original products [10]. In this case, the original product and the counterfeit product enter into unfair competition [1].

Brand infringement targets another type of market, namely the secondary market, in which the consumer is aware of the counterfeit status of products and yet desires to buy them on account of their low prices relative to the original products and with an acceptance of their inferior quality [13].

Several factors influence the consumer's decision towards the demand for counterfeit products, including those related to the product itself, its characteristics, the cost of searching for it and others related to the consumer. There are also many factors that encourage imitators to copy the brand and provide counterfeit products [2].

The rest of this study is divided as follows. Section 2 summarises how marketing builds loyalty, Sect. 3 is about the types of brand loyalty, Sect. 4 lists the factors affecting brand loyalty in the digital age, Sect. 5 lists different brand loyalty examples, Sect. 6 summarises the reasons why some brands lose the loyalty of their customers, and the study ends with Sect. 7, which is for the conclusion and future extensions.

2 How Marketing Builds Loyalty

2.1 Creating Vision

Marketing your products on different digital platforms helps to promote the visibility needed in creating a brand name [3]. When users begin to see a company's name, logo, and products continually on different platforms, they start to become familiar with them [33]. The best way to do this is to promote your brand on platforms that your target audience is likely to visit often [6].

2.2 Establishing Trust and Credibility

Since users frequently see a brand name, they establish a connection to it on a sub-conscious level [1]. It sounds familiar to them and consequently they begin to trust the name [12]. Delivering the quality promised through branding and marketing campaigns is essential to retain their trust and maintain the credibility of the company [2].

2.3 Enabling Two-Way Communication

Digital platforms enable two-way communication [3]. Not only do emails, online forums and social media platforms allow a company to communicate with its target audience [11], and also allow the target audience to reach the company easily. Accordingly, being active on these platforms helps to gain customer satisfaction, though it is crucial to respond to customers in a timely and efficient manner in order to retain their faith in the company and brand [2].

2.4 Attracting Investors

Digital marketing helps to attract investors as well as consumers [4]. In promoting products and services and talking about business values across multiple digital platforms, companies come into the spotlight and receive greater interest from investors [7]. This attention is crucial, as it is well known how important the right investors are in establishing and growing a brand [8].

2.5 Presenting the Work Properly

Building brand loyalty is achieved by following the correct steps, without neglecting any of them, and by presenting the right products and services to the public [15]. To do this, it is critical to focus on providing valuable products and services that convince the consumer you are the right partner for him. To get customers to the stage of adopting the product or service, first pay attention to their pain points and then explain effectively how the product or service you offer can remedy these and provide a satisfactory solution [5].

During the marketing of the product or service, place the focus on the value it adds to customers and the solutions it provides them with [11]. Do not focus solely on describing the quality of the product [7]. To gain their trust, customer concerns must be taken into account as far as possible. This can be done through a professional team trained to deal with customer satisfaction, whether it be answering phone calls, emails and social media, or following up customer complaints in detail to find out the reason for their dissatisfaction, with the aim of finding a solution to their problem as soon as possible [8].

The findings showed that customers who had a bad experience and received great service in resolving it were more likely to become brand loyal than customers who did not have a complaint at all [2].

2.6 Creating Own Stories

Creating a strong story about your brand builds and enhances customer loyalty by providing a clear narrative about how the company was created and why it is in the market such that it encourages customers to interact with the company [9]. As the story engages with the human brain just like real events, care must be taken to ensure the story is conflict-free while still being compelling enough to attract customers [13].

Some of the most successful and influential stories are about the creation of Facebook, Amazon, Alibaba and Kentucky Stores and others [7]. It is common knowledge how these companies started and what difficulties their creators faced in the early stages [9].

2.7 Having a Customer Service Team

The best way to win over customers is to make them feel that the organisation fully meets their needs [38]. Customer data must be organised and used so that each customer gets the best value from the company's products [14].

2.8 Sharing

By listening to their opinions and suggestions in designing the product, customers are able to participate in the brand [15]. When interacting with a brand, most customers expect to be answered within four hours [11]. This may sound demanding, but catboats make it easier, and case management directs customers' issues to the right department [12].

2.9 Implementing Loyalty Building Programmes

In order to continue paying attention to its loyal customers, the organisation must adopt loyalty programmes that target customers correctly [8]. A study must be conducted to choose the right customer by targeting individuals who are most likely to buy the products [8]. It is important to remember that it is the small details that win the hearts of customers, and one way to achieve this is by designing a loyalty programme that is suitable for your business and your customers [3].

2.10 Paying Attention to the Emotional Side of Customers and Creating an Interactive Community

The organisation should provide a good consumer experience with an emotional focus and make the brand's online presence, especially on social media, distinctive and effective [13]. Social media channels should be employed as a nucleus for forming a loyal community around the business [3].

Here, it is vital that your stories and posts speak accurately to your customers, as well as your videos and photos, and make them feel like they are talking to a regular person rather than a brand [14].

2.11 Adopting a Good UX for the Website

Most consumers prefer to shop online, so ensuring your website has a good user experience (UX) is a powerful tool to increase customer loyalty. Alternatively, in one study 88% of shoppers expressed that they did not want to shop again from some online stores because of the bad UX, as well as over 70 digital businesses having failed for the same reason [2].

Because there is a relationship between brand loyalty and the Internet, if a company already has a website, it must constantly develop and make improvements to it, in terms of navigation, speed, clarity and so forth [5].

2.12 Being Transparent

We live in the information age, so access to any information is possible and available. As such, transparency and acknowledging mistakes in the brand are important. Responsibility must be taken for the mechanism by which products and services are provided, and attention must be given to the social and environmental impact of production [15].

2.13 Pricing

Providing offers, low prices and discounts helps to retain customers and makes them feel that the company is offering the best prices among competitors and building marketing and sales programmes for their benefit [7].

3 Types of Brand Loyalty

There are six patterns of consumer brand loyalty:

- 1) **Loyal consumer:** This type refers to loyal consumers who continue to purchase products and services of a particular brand all the time [2].
- 2) **Divided loyalists:** Consumers whose loyalty is divided between more than one brand, where loyalty may be to one, two or three brands [9].
- 3) **Converted loyalist:** A consumer who switches loyalty from one brand to another.
- 4) **Unloyal:** A consumer who has no brand loyalty [15].
- 5) **Price-related customers:** Customers whose first loyalty is to the price and therefore have no particular brand loyalty. Rather, loyalty is temporary and depends on the lowest price available [3].
- 6) **Loyal customers by virtue of habit:** Customers who are accustomed to buying a certain brand and therefore their loyalty is driven by habit beyond anything else [6].

Additionally, some divide brand loyalty into:

- 1) **False:** A customer purchases a product or service motivated by certain stimuli, which may be situational stimuli or social norms, but these positive trends do not last long [15].

- 2) **Actual:** In this type, the loyalty of the customer to the brand is at its peak and the customer rejects the offers of competitors [14].
- 3) **Voluntary:** The customer has relative loyalty, but the chances of repurchasing are also low [2].

4 Factors Affecting Brand Loyalty in the Digital Age

There are a number of factors affecting customer loyalty to a particular brand, including:

4.1 Quality and Perceived Value

Perceived value is simply the customer's perception of the quality and value of a particular product compared to competitors, which adds a competitive advantage to a particular brand [3]. Perceived value is not an intangible or tangible value but rather a set of consumer feelings about the benefit and quality of a particular product [1].

Achieving perceived value in a brand is often difficult for a number of reasons, mainly because of the increase in customer expectations driven by continuous development and the intense competition between different brands [5]. Also, considering that perceived value is achieved after the consumer uses a product and not before it, this makes product quality and consumer satisfaction a prerequisite [3].

Perceived brand value confers a range of features, including (1) priority among competitors [4], (2) enables the brand to raise its price [11], (3) a powerful reason for consumers to buy [3], and (4) opens horizons for the brand to expand and introduce new products [6].

Quality plays a huge role in brand loyalty and has a set of criteria. It includes (1) product quality [15], (2) price is a key factor in attracting customers [1], (3) innovation, namely the brand's ability to provide its customers with everything new [2], and (4) places of distribution, usually symbolic of the value of the brand [10].

4.2 Paying Attention to Customers' Behavioural and Sensory Experiences

A study conducted on 383 self-service store customers in Egypt (Carrefour, Hyper One and Spinneys) found a strong relationship between behavioural and sensory customer experiences and brand loyalty. This means that marketing managers should pay attention to creating a positive sensory and behavioural experience for customers during their interactions with workers and employees in order to gain their trust [14].

4.3 Internal Marketing

To encourage employees within an institution to be internal customers, it is necessary to take care of them and raise their job satisfaction. In addition, when teams are properly qualified, they will provide good customer service to consumers and serve as a good interface for the institution, which also helps to raise brand loyalty [11].

5 Examples of Brand Loyalty

To be clearer, here are some examples of brand loyalty:

5.1 Apple

Brand loyalty is perfectly embodied by Apple [15]. The reason the company has so many loyal customers is that Apple has been able to meet the needs of its customers, provide high quality products and consistently innovate through its customer technology [9]. Apple has benefited from this tremendously, and the company has achieved increased customer retention and reduced marketing costs [8].

If by chance you have followed any news of Apple releasing a new phone or product, you will have noticed several things: the large number of consumers who book their products in advance, the long queues of customers who amass in front of Apple outlets, and the unwavering loyalty of customers despite the high prices of Apple products [12].

The key lies in the quality and value of Apple products, where customers feel that they are distinguished simply because they use them. This is what we call building brand loyalty [2].

5.2 Adidas

To create and build brand loyalty, it is necessary to present an image that matches your vision and values. The famous Adidas brand, for example, specialised in the field of clothing, shoes and sports products, and presented its image, values and vision professionally [7].

Adidas thrives in the world of sports, which was the passion of its founder and famous shoemaker Adolf Dassler. Everything it represents is expressed in the motto: 'Impossible is nothing'. So how did Adidas build brand loyalty?

Adidas identified athletes as its target group and then expanded its category to all those from the general public interested in sports, by listening to them, understanding the problems they faced and trying to meet their demands [12].

Quality: It has maintained the quality of its products over the years [12].

Innovation: From the beginning, Adidas gained a competitive advantage in the market, providing light shoes for players and then continuing to innovate through its various products [14].

Listening to its customers: Adidas is always ready to listen to athletes, to meet their expectations and even to exceed them, and as such it has made significant strides in customer engagement [3].

Community participation and responsibility: Adidas also participated in the creation of many sporting events in the world, which gave it status and continuity in the face of competitors [4].

6 Reasons Why Some Brands Lose the Loyalty of Their Customers

Primarily, brands lose the loyalty of their customers because they stop understanding and fulfilling their needs. They no longer satisfy customer expectations and so fail to keep pace with the market and product development. Finally, when the quality of their products begins to deteriorate, customers start forming loyalty to competing brands [3].

In conclusion, the process of building brand loyalty is an integrated process with various elements, whether it be studying the market, understanding the needs of customers, listening to them and creating a good buying experience for them, or paying attention to product quality and continuing to innovate and provide competitive prices [15].

Finally, it is crucial to pay attention to the human element in providing services to customers from the internal marketing of the organisation [12]. When these elements are complete and work together, building brand loyalty becomes relatively simple, considering that it is an ongoing project without respite, because rest means failure [12].

7 Conclusion

The results showed that organisations seek, through the videos and advertisements they publish on their websites, to achieve several different goals that serve their marketing objectives. The main objective is to consolidate the organisation's brand to its target audience, with other goals varying between being informative, memorable, improving a mental image, activating sales, sponsorship, brand loyalty, social responsibility, competitiveness, and finally rebuilding the brand for the organisations that changed their name and business or changed the shape of their product.

The results demonstrated the public's willingness to interact with videos and advertisements published on the organisations' channels, by watching these videos, clicking on the like or dislike button and adding a comment on the video.

The results of the study indicated that the viewers of the organisations' channels on YouTube are an active rather than a passive audience that receives the content without interacting with it. In fact, the audience is eager to interact with the content published on the organisations' channels in more than one way. The results of the field study showed that the most popular method of interaction is to press the Like button, followed by adding comments on the videos and inviting friends to join the channel, which are methods that require mental effort.

The results showed the failure of the organisations in question to use their sites as a platform for customer service practice, to listen to and respond to customer complaints and inquiries.

The results showed that the majority of the organisations under study do not use their YouTube channels to establish two-way communication with their audience. The results showed that these organisations are not interested in responding to the public's comments and inquiries received on their videos.

This study can be extended in several ways: First, by considering a qualitative approach to test the effectiveness and strength of each of the marketing factors to build loyalty. Second, by testing the effect of customer loyalty on the total cost of the supply chain. Third, by testing how customer loyalty affects the management of the inventory. Lastly, by looking at how each marketing factor affects the total cost of the supply chain.

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The Impact of Social Media on E-Commerce and Marketing

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Abstract. This paper reviews how social media has impacted e-commerce and marketing. Social media has a big role today for companies and consumers. Businesses use it for communication, marketing, and other ways to gain profit. The youth around the world are heavy users of social media, including for online purchases. Therefore, businesses are increasingly employing social media within their companies to compete in this digital age.

Keywords: Social media · e-commerce · Marketing

1 Introduction

During the past years, consumers are increasingly accessing social networking sites to find information about various products and services, rather than depending on traditional channels such as television, radio, and periodicals. Every sixth person on the planet now has a Facebook account, and nearly four out of five Internet users are connected to at least one social media platform. With the growing number of internet and social media users, understanding online customer behavior has become essential for major brands. The rise of social media has resulted in a shift in media consumption, prompting businesses and organizations to use social media as part of their marketing and public relations efforts. As a result, social media is becoming a more widely used platform in E-Commerce to sell services and resources to present and potential clients. Therefore, we can define social media as a web-based social communication tool that allows people to communicate with one another through sharing and consuming information [1].

Marketing and advertising techniques have shifted from mass market channels like television and radio to the social platform as a result of the introduction of social media. Today, all big brands and organizations boast enormous fan bases and followers on major social media platforms such as Facebook, Twitter, YouTube, and Instagram, among others. Social media platforms are not only cost-effective, but they also bring the producer and consumer closer together [1].

Social media has changed, and its user base has grown faster than the population of several countries. Newspapers and magazines were the preferred media in the 1930s.

P&G was the first corporation to advertise in print media. The 1950s are known as the “TV commercial age,” with marketers gravitating toward electronic media commercials. The concept of corporate social responsibility was first introduced in the 1960s. During the 1970s, the computer was invented, and applications such as logos, credit cards, direct marketing, media research, payroll, visa cards, and master cards were developed. The introduction of cable television in the 1980s altered the landscape of advertising media [2]. Print media is still used nowadays, however, could not be used by itself anymore and need the assistance of technology [3].

Marketers are continually looking for new ways to pique the consumer’s interest. People have embraced modern media and technologies to such an extent that they have given marketers the ability to reach consumers 24 h a day, seven days a week through several outlets. It increases the likelihood of messages getting seen. As a result, it’s only natural to entice marketers to use social media. Traditional campaigning methods are being eclipsed not simply by the rise of social media, but also by the increasing difficulty of creating a standout campaign in a highly competitive market [2].

Due to the fact that technology is advancing, and everything is becoming automated, and people tend to use social media a lot, businesses are also taking their path towards the internet, and even startups businesses are tending to go towards online selling and marketing, due to many different factors such as the low startup cost and social media will help businesses reach a wide range of potential customers. Thus, the correct use of social media whether it was for promoting a certain product or service or for sales purposes, will indeed provide competitive advantage to that business. Therefore, this research will help discuss and discover the various impacts that social media will have on marketing and e-commerce.

2 Overview

In this modern era, social media is the necessity of life. Social media is one of the fastest mean to gain any kind of information. It plays a vital role to supply knowledge to their clients. And because of this, clients take decisions of whatever they want. Therefore, this article shows the image and impression of social media in market and daily life. There are some researchers who have done researching on social media and they are referred for other researchers as well.

2.1 Literature Review

Hoffman and Novak (1996) have shown that collaboration is an important factor in distinguishing between online marketing communication and mainstream media. Today online consumers have more control and negotiation power than conventional vendors because the internet provides more correspondence among the users and providers of commodity/services with additive attainability of understanding for commodity and services [4]. Geissler and Zinkhan (1998) said that the Internet revolutionized the rest of the world in terms of increasing the bargaining power of buyers as it became less troublesome for them to procure substitutes without being influenced by the vendors. Virtual stores diminish transaction costs and are beneficial for both buyers and sellers

[5]. Pandit and Agrawal (2022) also highlighted the importance of the Internet, especially during the Covid pandemic [6]. Suki and Suki (2016) prescribed that advertisers should offer more promotions such as advertisements or discounts, that too online [7]. Yulihastri et al. (2011) studied online consumerism, ease of use, compliance, confidentiality, surveillance, common beliefs, efficiency, behavior, and student purchasing intent [8]. They came to know that web advertising has a positive effect on the purchasing of a company's products. Consumers are increasingly looking for the so-called "seamless omni channel experience", which means that retailers allow them to merge online browsing with inventory and its storage, purchase, order and return for any combination they would like.

Sharma et al. (2014), surveyed consumers Internet based procurement in India, and discovered that consumers are afraid of unsafe transactions in online payments and that most online shoppers are from 18–25 years old [9]. Ioanas and Stoica (2014) discuss the impact of social media on consumer behavior, consumers prefer to shop online for utility and majority customers check product information before purchasing commodities [10]. Bauboniene and Guleviciute (2015) are key factors that influence consumers to buy online comfort, clarity and suitable price [11]. Muda et al. (2016) investigated Gen Y's online shopping behavior in Malaysia and identified the fundamental aspects [12]. They reached the conclusion that Gen Y in Malaysia purchase mainly from social media sites such as WhatsApp and Instagram.

Bhagwat & Goutam (2013) stated that social media is necessary in business [13]. Social media helps people connect with each other however far they are. There are many ways of social media in which we can connect with each other easily and vastly. From their study, they came to know that Facebook is one of the most used apps in social media networking. In the conclusion, they said that social media is giving aptitude, talent, skills and solutions in business and to people as well.

Kumar & Singh (2013) studied how social media communication help in building a bond between customers and clients in business and market [14]. The campaign "Live the Moment" was designed for the Maruti Suzuki in recognition of their brand new car through social media. Because of this, they come to know that social media helps this campaign to be most victorious by the company. They make this master plan to build bond between customers and their brand new car. And it also encourages connection through social media. This not only helps to excite their social fans but also expand the apprehension of other share holders.

Ramnarain and Govender (2013) conducted a study with 150 students, aged between 18–24, and studying at a university in South Africa [15]. Their questionnaire resulted in showing that there is a bond between males and that the youngsters gain behavioral changes through social media. There are three main factors such as some channels are critical for communication, improving product, and spending power and choice of brand. They suggested that marketers must change their communication and advertising procedure for the sake of obtaining behavioral changes of the youngsters.

Shabnam et al. (2013) studied the role of social media in market networking. They made a point to how marketers develop relationship in their target population [16]. The study focused on the youngsters of Bangladesh and observed many consumers and responses related to social media. They also ask questions with the marketers that how

social media is important in their life and how they utilize it on their daily basis needs. They can also know what the strategies that are being used by the sellers all around for them to reach the highest ranks of sales.

Valeecha and Reza (2013) examined to what extent social media is helping out different telecommunication brands in Karachi, Pakistan, and what is the feedback of users by keeping in mind the factors that are vital for a favorable outcome of these telecom brands [17]. They gathered data from five different telecommunication firms and 8 social media platforms. They found that users that use social media daily have an expectation from organizations to be there on social media platforms by combining with users' relationship strategies and always be ready to connect with buyers.

Bajpai and Pandey (2012) studied how the idea of marketing establishes itself on social networking platforms [18]. They decided to choose Facebook for their research. And come to know that direct marketers that have clever techniques for the Facebook environment will undoubtedly succeed. They also emphasize the benefits Facebook gives to brand marketing. And summed up that there is much to learn about marketing which is still in its infancy.

Bajpai et al. (2012) did another research in the same year on social media marketing techniques and how their effect draws attention to many small companies' social media marketing techniques [19]. This viral marketing technique can be outside of the current social media and can help to create a strong enough group to enable effective buying and marketing. Furthermore, they also correlate it with other conventional marketing techniques as well. Similarly, to determine the efficacy of social media as a marketing tool, Bashar et al. (2012) did an observational study [20]. They used a non-probability convenience sample technique and a questionnaire survey to undertake their study across 150 social network users in the Delhi and NCR areas. Eventually, researchers discovered that social media as an advertising medium would only be successful in the case it brings customers real-time information that they need to narrow the gap between their perceptions and what they truly seek moreover, he suggested that businesses in today's society need to be adapted as social relationships rather than transactional relationships. They also elaborated on a few important points to reach these goals.

Castronovo and Huang (2012) highlighted the role played by social media as a replacement for the marketing communication model [21]. To make word-of-mouth Marketing, social media, and other mediums for marketing communications a possible element of integrated marketing communication was their main motive of work. Apart from that, they have also established an alternative marketing model that can be utilized by industries. Which will aid them in achieving their marketing goals such as escalating sales, a surge in consumer awareness, and improved loyalty of users. Hence all different elements of the model could be combined to gain a successful outcome.

Jati and Mohanty (2012) outlined the surge in recent years and trends in social networking media [22]. They stated that social media plays an essential role in building a company's brand and paving the way toward success. They have provided recommendations for companies that are competing in an international atmosphere.

Kaplan et al. (2010) shared the notion that social media should be the main priority for companies [23]. This will help organizations to make their way toward success and allow them to make profitable choices also advisors are trying to highlight ways to

do it using a variety of social media platforms. Additionally, they presented a concise definition of “Social Media” and elaborated on what it actually implies. In the end, they also represented 10 important points for companies that are willing to put social media into services.

Mangold and Faulds (2009) put forward an analysis according to which social media was described as a new mixed component of advertisement [24]. They strongly suggested that when developing and putting into practice their marketing communication techniques advanced marketing should make use of social media as a promotional device because social media covers a massive amount of the public. Customer feedback should be considered by administrators in a way that will help the organization to achieve its objectives. Apart from that they also shed light on the measures that can be adopted to achieve this viz, along with providing users with satisfactory platforms. Mangold & Faulds’ study is consistent with Boone and Kurtz’s (2007) which claims that the integrated marketing communications’ goal is to organize practically all aspects of marketing strategies including, advertisement, personal sales, direct marketing, and sales promotion along with public relations to provide a combined customer-focused communication [25]. Companies would have to acquire a new model of communication in order to become successful. This new model of communication will allow users of social media to exchange ideas.

Bernoff and Li (2008) used 25 examples to demonstrate how businesses can use social platforms to enhance their market knowledge, generate income, save money, and to automate their workforce using these networking sites [26]. They also outlined how crucial it is to know how new connections are made on social media.

Ranjitha and Sinnor (2012) examined usage methods of different famous social media platforms and choices of users using these networking sites [27]. They chose a range of age categories and occupations to carry out this study. They monitored Facebook conversations for several weeks. The findings conclude that Facebook is the most affordable platform that any business can utilize for advertisement, and buyers are learning more about the items, and the businesses are interacting directly with customers, growing their sales volume.

Edosomwan et al. (2011) explained how social media has transformed in these recent years and in what manners social media has changed the way how people interact with one another and communicate globally [28]. Additionally, they shed some light on ideal scenarios for using social media such as ensuring effective communication between the staff and managers, encouraging teamwork, idea sharing, etc. among workers. At last, they also talked on various social media platforms such as Facebook, YouTube, Twitter, and Lunar Storm.

Greer & Ferguson (2011) used a qualitative approach to find out the use of Twitter for marketing and advertisement [29]. They looked at the Twitter accounts of 488 regional tv channels across the United States of America using a technical model of media advertising. They discovered, among other things, that news headlines were the most frequently appearing content on the websites and that channels that gave news headlines also infrequently publicized their usual broadcasting. Certain things in this area, such as promotions for competitions, announcements of news headlines, or requests for

user participation, did not appear frequently. Finally, they believe that channels did not actively promote using Twitter to direct viewers to the channel's live programs.

Hanna et al. (2011) examined how customers participate in the co-creation of advertisements with businesses and their labels [30]. They discovered that businesses encounter a variety of difficulties because they lack a comprehensive knowledge of how to use social media efficiently which metrics they ought to be using and how they ought to evaluate them. In their study, they provide a methodical framework for comprehending and conceiving online social media as a network of interconnected components encompassing both physical and virtual media. They provided this methodical framework by highlighting the Music Academy's design and implementation of their marketing strategy for the 52nd Grammy music award held in the year 2010. They also offered five principles and various insights as a conclusion. For example, visualizing, monitoring, reporting, having no funds, and being different pertaining to the smart introduction of digital media into a company's marketing planning process.

Moise (2011) highlights the fact that several advertisers think companies can actively advertise just a single edge over their competitors in the industry and by doing so through social media, they might seem more appealing to customers [31]. Moreover, they also said that a company can examine how the market that has been targeted reacted to past engagements and identify the platforms on which various stakeholders have responded most successfully.

Asur and Huberman (2010) have shown how information from social sites is utilized to forecast actual findings reported on using digital platforms to anticipate the future [32]. They calculated box office sales for films using Twitter's discussion. Apart from that, they examined a role having great importance in forecasting actual box office results while concentrating on popular advertising methods and pre-release enthusiasm on Twitter. At last, they looked at the feelings engendered by the spread of both favorable and unfavorable viewpoints.

3 Conclusion

Social media has had a revolutionary impact on both e-commerce and marketing due to its convenience, cost-effectiveness, and reach. The growth in social media usage over the past two decades has given companies a platform to market and retail products digitally at lower costs. It has also enabled companies to engage with wider audience, gauge customer sentiment and enhance offering more efficiently.

The accessibility of social media platforms worldwide means that smaller retailers can now promote diverse and potentially cheaper alternatives influencing customer purchase decisions and obstructing loyalty. The emergence of big data and artificial intelligence technologies has led to personalized feeds across social media platforms which has exasperated the issue. According to Forbes, 81% of purchasing decisions are influenced by social media posts.

Social media is rapidly becoming the backbone of business strategies across the globe [33]. According to the 2022 CMO Survey, retail businesses typically spend around 15% of their total marketing expenditure advertising to customers on social media. It is expected that social media will reach 23.5% of marketing budgets in the next five years.

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The Factors Affecting Online Buying Behavior of Consumers During Crises: Literature Review

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Abstract. The aim of this research paper is to understand the consumer buying behavior online during the crises. It is important to distinguish the factors that affect their online buying behavior. Many researchers have identified that consumer buying behavior is impulsive, it evaluates how emotion, thoughts and preference vary from consumer to consumer. Nowadays, purchasing any product and services is clearly different from the past-days and it is extremely influenced by digital marketing as a successful tool for increasing good advantage. The difference is that the consumers in the 21st century are more sophisticated, and better concerned with innovative technology and internet network. Whereas they search for any product and services detailed information easily and feedback from different consumers/users. In order to achieve in today's world and the rapidly developing market, marketers need to understand everything about their consumers such as; what they want, what they need, what they work and finally how they want to spend their money and time. Many factors influence consumers in his/her decision-making process, purchasing behavior and the selection of specific brand or merchant. By indicating and understanding the factors the marketers will have good chance to develop their strategy to attract and maintain their recent consumers and potential consumers as a real strength to better meet the need of their consumers.

Keywords: Factors · Online-buying · Crises · Literature review

1 Introduction

The fast development of internet network around the world has empowered business and consumers to be more associated than in the past. This has expanded the connectivity to the spread of electronic commerce, a zone that has extended exponentially during the past decade. The transformations of consumer buying behavior over decades has controlled the retailers to investigate into psychology of online consumers. The difficulty of interpreting the online consumer buying behavior is complicated by zero physical interaction during the purchase (Jinang et al. 2008; Mukherjee and Nath 2007).

In the online world, the issue of protection and security are intensely basic and cannot be over emphasized. The security is considered the state of confinement on the data. The

security is the main inhibitor to the online buying and is characterized as the capacity of the framework to avoid snoopers from getting access from the available personal data online or abusing the personal data. However, there is an existing connection between privacy and security in terms of online transaction. According to an extant research, privacy and security function as an important component of digital business and are the main factors influencing the online buying behavior in selecting and attitude (Cheung et al. 2005).

Due to the current situations there is a decrease in economic situation and how policymakers, governments and businesses will overcome the harm of crises and how marketers will react to the shift or change of purchasing behavior. Along with the pandemic digitalization of economy action has taken a critical jump. This has given an increase in the online marketing. The effect of crises on our lives, behavior, and our routines. But in the age of internet network and crises, the marketers ought to promote their products and services online. Leveraging the control of innovative technology can be successful, particularly in the time of the current pandemic, to be active and closer to the consumers. In these circumstances marketers needs to understands their consumer, and assist them in their purchasing process. The online marketing has demonstrated to be a viable way to communicate with their current and potential consumers. The consumer needs more positive communication from their desired brand or business and as more consumers and staying at home due to lockdowns and the spread of the virus, consumers are now currently looking toward social networks and smartphones to keep them feeling associated, updated and engaged with what is happening. In the modern conceivable outcomes advertised by innovative technologies, it encourages interaction between consumer and business.

Through the crises, there has been extreme media attention relating to the current crises, and consumers are out to an expansive amount of data referring the circumstances (Loxton et al. 2020). Increasing level in economic instability during the crises deliver a unique opportunity to examine the ways in which both anxiety stemming from data on current circumstances within internet and anxiety from online network impacting consumer buying behavior. Thanks to the internet network, consumers are offered with new opportunities to improve their power in connection with businesses. Other than reaching to an uncommon amount of data, online consumer can compare wide range of products, access widely and qualified sources of skills, and associated in a proficient and beneficial way with businesses and shops.

However, online consumer may play a dynamic part in both marketing communication and the product design related to the benefits and values to the consumers themselves. These consumers are more prepared and ready to spread their opinions about products and services whether favorable or unfavorable, and even to authorize business among prospective audience. Online consumer benefit from a collective insight, demand more control over their purchasing experience and the plan of value propositions in terms of their personal interests. Within the online innovation, businesses are more prepared to face challenges of satisfying the online consumer buyers. Moreover, profiting from the online based processing framework to oversee the extraordinary amount of buyer information, business may embrace progressed consumer centric standard and characterize,

create digital marketing methodologies and programs that are more accurate and more coordinated to consumer needs.

2 Theoretical Framework of Buying Behavior

Engel, Kollat, and Blackwell have presented the EKB model in 1968 to clarify the decision-making process of buying behavior in 5 stages. Problem identification, Data search, Evaluation of options, Purchase decision and Post-purchase assessment (Engel et al. 1968). The model was created by Engel, Blackwell, and Miniard (EBM) into the EBM model in 1995 to increase the decision process to incorporate data input, data handling, and other factors impacting the decision process. Compared to the original model, the EBM model pays more consideration to the external factor impacting the buying behavior process and is subsequently utilized in the study (Blackwell et al. 2006).

The EBM model illustrate that the buyer decision making process is impacted and shaped by a few factors and determinants. These factors are divided into 3 wide categories, specifically psychological form, consumer differences and environmental impacts. The psychological form alludes to the 5 steps from the original EKB model that have been modified into 7 steps within the decision process; problem search, pre-purchase evaluation of alternative, purchase, utilization, post-consumption assessment and satisfaction. Consumer differences include consumer resources, knowledge, attitude, personality, value and lifestyle. Environmental impact includes culture, social class, personal influences such as the buyers with family, and the circumstances such as the behavior changes reliant on the circumstance (Blackwell et al. 2006). However, the EBM model demonstrate has received throughout the years for instance, the EBM model has been criticized for having a mechanical diagram of human behavior. The model ignores consumer, social and situational factors impacting consumer purchase. Further, the model is contended to be well complex, as the factors are vague leading them to be difficult to examined and uncertain for useful habit (Foxall 1980; Jacoby 2002). Different model used to clarify the consumer buying behavior which pays more consideration to social and situational factor is the Theory of Planned Behavior "TPB" (Brug et al. 2006). Both models, EBM and TPB are utilized to show how the impact of factors can look in term of output. Each variable will be critical indicator for understanding the changing of consumer buying behavior during crises.

The TPB model was demonstrated in 1985 by Ajzen and is built on the prior model of Theory of Reasoned action developed by Ajzen and Fishbein in 1975. The TPB model is demonstrated to clarify assumed influencing factors on consumer buying behavior under ordinary condition. The model was also created to predict consumer individual behavior, by considering attitudes, subjective norms, and perceived behavior that impact the influence to perform a behavior (Ajzen 1985).

Attitude towards the behavior is illustrating how people surrounding the individual feel about any behavior, and how these are affected by the strength of the behavior convictions and assessment of potential result. Behavior beliefs let people understand motivation behind the potential results of the behavior. Subjective norms are alluding to how perceptions of others can influence the performance of a behavior. Normative beliefs

can be created by which behavior is accepted or not by a social group and motivation of people will determine if the person will observe with the social circle beliefs and opinions. Perceived behavioral illustrates individuals cautious for a certain behavior, however the behavior is disturbed by subjective and objective reason like beliefs (Ajzen 1985). The TPB model has been panned because the connection between intention and behavior is frequently considered due to the control of behavior. Moreover, the model is useful when there are positive attitude and beliefs regarding the behavior (Kothe and Mullan 2015). Furthermore, many researchers appeal that models ought to adjust and developed to latest version regarding the vast change in the society (Xia and Sudharshan 2002).

By understanding what impact, the consumer buying behavior, these models will be utilized as motivation to build an adapted version of buying behavior of consumers during the crises.

3 Literature Review

3.1 Consumer Online Buying Behavior

Many years ago, consumer and their behavior have been discovered both in in science and in practice. Consumer buying behavior study is more beyond marketing. Research's in this range started within the year 1960's. In the field of marketing, understanding consumer buying behavior is necessary for developing marketing tactics. Concurring to Solomon (2017), a consumer is a person who recognizes a need or want, purchase a product or services and after they go through three stages of purchasing process. However, the part of a person is varying in different scenery, for instance, if the adults purchase product for their children, they will be the purchasers for their children's, but also the children are the consumers. Consumers is a term for a person that purchases a product or services (Solomon 2017).

Moreover, understanding the means of virtual shopping and the behavior of the online consumers could be an important issue for experts competing within the quick extending virtual market. Consumer online buying behavior is progressively catching attention of researchers (Cheung et al. 2003). With the infinity development of the internet in term of consumer, transaction of volumes and trade penetration, this enormous search isn't surprising. More than 20% of internet users in some countries are already purchasing product and service online (Taylor Nelson Sofres 2002) whereas more than 50% of consumers frequently purchase online (Forrester Investigate 2003). These improvements are slowly changing the digital marketing into a standard commerce activity whereas online consumers are developing and virtual sellers realize the significance and urgency for a proficient and consumer-oriented approach (Lee 2002). To achieve more understanding of e-tailing, many researchers have drawn e-shopping support from different perspective. Consumer attitude will always be a critical predicator of consumer buying behavior and obviously, to e-consumer attitude to draw critical consideration from researchers. (Keen et al. 2002) has examine the structure of consumer choice on items, and how they determine the significance of attribution in decision making process. Many researchers have also tried to understand the online behavior by drawing on the Technology Acceptance Model (TAM) from the Information System (IS) literature (Davis 1989; Leder

et al. 2000; Moon and Kim, 200; Venkatesh and Davis 2000; Shih 2004). The following researchers have accomplished that consumer attitudes toward e-shopping are high and clearly connected with consumer acceptance to this shopping procedure.

3.2 Consumer Buying Behavior in Response to Crises

The buying behavior of consumers tend to change during crises (Nistorescu and Puiu 2009). The consumer's responds to any changes during the circumstances around them and his/her utilization. This happens due to the change within the level of his/her perception of risk. The consumer buying behavior can alter depending on the income and financial steadiness of before the crisis occurs (Ang et al. 2000). Reasonable pricing and non-traditional offers are implemented, addition to the product offered did more to satisfy a need and also create a passionate association to provide consumer loyalty since the retailers were worried for consumer to return (Mansoor and Jalal 2011). However, consumer behavior by companies and consumers are outlined within the current widespread crises, for instance, Unilever chose to stop and redesign its way of promoting to save money on external promoting. Unilever also began to switch to cheaper options, and arranged for anticipated enduring changes in customer behavior. With the change of consumer buying behavior Unilever, anticipated to see an increment in consumer spending more time at home in lock-down days and quarantine long time during the crises (Marketing Week 2020).

However, crises impact the consumers not only economically but also mentally. Consumers becomes more careful. They don't want to spend a lot on product and services, even if they afford it. Consumers only purchase necessities, switch to cheaper alternatives and have more rational view on promotion and online products which are cheaper and faster. They begin to compare different products and services online based on price and quality (Nistorescu and Puiu 2009). The buying process in this circumstance can be changed from being a programmed behavior or limited decision-making buyer behavior to become extensive decision-making buying behavior. However, the consumer buying behavior past crises was not based on broad decision-making and information gathering. Unfortunately, after the crises the process became more complicated. Increasing inflation, or even diminishing of compensation, and decreasing purchasing authority, bad economic circumstances impacts the consumers in all types of markets. As long as consumer's are inspecting more about crisis and as long as the internet is centering on reflecting on the effect of the crises, there is mental influence with negative impact on consumers (Amalia and Lonut 2009). The impact of the crises on consumers can be reflected on their utilization. The researcher (George Katona 1974) proposes that various consumer believe that in short-periods when prices would be higher, they would have to spend more on necessities and so would have smaller assets at their transfer for the purchase of desirable but unnecessary products and services. Consequently, inflation encourages the delay of optional expenditures. (Katona 1974), has also believed that consumers are motivated to save because of the current situation. The saving rates decreases as economic condition strides. The researcher has also recommended that saving more or less is impacted by economic and mental factors.

3.3 Consumer Buying Process

The buying behavior process is used by the consumers in the action of purchasing any product or services before, during and after final process. It starts with the problem recognition and conclude with the post purchase evaluation (Kumar 2019).

Problem Recognition: The decision of purchasing products and services starts with problem recognition the desire and need a consumer to satisfy their needs. The concentrated of needs is the top priority of any consumer. The consumers will make an instant purchase of product and services that is important for them and delay the other needs or desire (Kumar 2019).

Information Search: When purchasing products and services consumer usually tend to review his/her consideration toward a specific product and experience. For instance, if the past-experience is positive then the information will end by the consumer. But if the past-experience is negative the consumer will tend do more search about it (Clow and Baack 2016, p. 76). For this purpose, the consumers always tend to search for more feedback and information from various sources such as family, friends and social media.

Evaluation: In evaluating process the consumer usually tends to search or seek for different options in product and services in form of features, price, quality, brand name and etc... The criteria to assess the product contrast on the circumstances and the consumer connection to it (Kumar 2019).

Purchase: After going through all the above process, the consumer has chosen to purchase the product after gathering information from some sources and evaluate what to purchase and from where. Consumer purchase the brand or product he/she provides the highest rank and satisfied. However, the buying decision also impacts by the surrounding environment (Qazzafi 2019).

Post-purchase Evaluation: Finally, the consumer always evaluates the performance of the product and service. They will either be satisfied or dissatisfied after the actual purchase. If the product or service meet the consumer anticipation, they will definitely repeat the process and will share about it positively. On the other hand, if the product or service didn't meet the anticipation of the consumer, they will definitely will not repeat the process and this will result into negative reputation of the product or service (Kumar 2019).

3.4 Factors Affecting Online Consumer Buying Behavior

There are many factors affecting online consumer buying behavior on different levels, from social factor to motivation, beliefs and attitudes within the people (Kotler and Armstrong 2018). Over-all, it can be divided between internal factor that impacts on consumer buying behavior and external factors (Hoyer et al. 2008).

3.4.1 Social Factor

Social Factor is the main factor that impacts the online consumer buying behavior. It can be divided into 3 parts that includes; Reference Group, Family, Role and Lifestyle.

Reference Group: Have the potential for the arrangement of an attitude or behavior of a consumer. The impact of reference group changes over product and brands. For instance, if the products are noticeable as clothing, bags, cars etc... The impact of reference group will be high. However, reference group also involves opinion leader such as social media influencer (a person who impacts others by experience, information and feedback) (Ramya and Ali 2016).

Family: Family members are unequivocally affected in buying behavior. Marketers are attempting to discover the influence of siblings, cousins and other family members. For instance, if a member is satisfied with a particular product or service, they will recommend it for their family members to follow or purchase it (Ramya and Ali 2016).

Role and Lifestyle: This is another factor which has an impact on buying behavior of consumer. Because it alludes to the way person life and work in a society and express things in the environment. It has also been determined that the consumer interest, opinion and actions appeal their way of interacting with the world (Ramya and Ali 2016).

3.4.2 Economic Factor

Economic factors are impacted by the consumer buying behavior. The economic circumstances of consumers impact its purchasing decision and selection of specific brand, products and services. The businesses can think of a consumer buying behavior of spending money or saving it. For instance, websites or brands can offer discount or sale on product and services in occasions such as Ramadan, Eid or beginning of the season. There are some economic factors which are; Personal Income, Family Income, Income Expectations, Savings and Consumer Credit (Ramya and Ali 2016).

Personal Income: It alludes to a consumer income, and it impacts a consumer buying behavior (Ramya and Ali 2016). The consumer purchases its desire product and services on the basis of his/her income.

Family Income: It alludes to the total income of all family member. Family income affects the buying behavior of the family. The surplus family, remaining after the use of the essential need of the family, is available for purchasing product, durables and luxuries (Ramya and Ali 2016).

Income Expectations: Are one of the critical factors of purchasing behavior of a person. If he/she expects increase in the income, the consumer enticed to spend more on products, durable goods and luxuries. Moreover, if the consumer anticipates any drop in the future income, they will limit their consumptions on comfort and luxuries and limit their consumption for necessary item (Ramya and Ali 2016).

Savings: Consumer buying behavior is also impacted by savings. A alter within the sum of savings funds leads to alter in the spending of the consumer. For instance, if a consumer wants to save his income, he/she will spend less on purchasing goods and service (Ramya and Ali 2016).

Consumer Credit: The availability to the consumer covetous of purchasing durable and luxuries good refers to the credit facility. It is made accessible by the sellers, either specifically or through banks and other financial institution (Ramya and Ali 2016). Consumer credit impacts consumer behavior. If the consumer credit is obtainable in liberal term, purchasing durable goods and luxuries increases, because it motivates consumer to buy more of these things, and raise their lifestyle standards.

3.4.3 Consumer Satisfaction Factor

Customer satisfaction is vital in today world according to (Deng et al. 2009). This factor is how consumer evaluates the product and service performance (Gustafsson et al. 2005). Consumer buying behavior are related to each other, particularly within features of quality, pricing and decision making (Kumar 2011). The consumers obtain their purchasing decision on information, feedback, customer service and indications such as product name, design and price (Samiee 1994). The main factor impacting the consumer buying behavior is indicated in the paper above which is cultural, social and personal. However, the satisfaction of consumer may affect the concerned company by repurchase, buy more items, and positive word-of-mouth and readiness of consumer to purchase more for the specific brand. Consumers nowadays wants easy and high-quality products that help them to purchase the same product or services more in future (Ahuja et al. 2003).

Moreover, consumer is essential and valued outcome of any good marketing practice. Expanding consumer satisfaction has been created to higher future productivity (Anderson et al. 1994), lower price linked to unreliable product and services, expanded buyers to purchase, provide referrals and more use of the product (Reichheld 1996; Anderson and Mittal 2000), with higher level of consumer retention and loyalty.

3.4.4 Availability of Products

Online websites have made purchasing less stress-full than it was, and online websites or applications deliver consumer benefits by method of offering more variety of products and service that consumer can select from (Lim and Dubinsky 2004; Prasad and Aryasri 2009). Consumers can discover broad extend on products and services which would be possibly accessible fully online in any time or location. Many organizations have their own websites or application to provide their products and services online, regardless of they have opportunity replacement or not. Various actual physical shops provide beyond any question stock that is exclusively online to reduce their retailing price or to offer consumers more choices or highlights. However, online purchasing also offers best prices (Amin 2009) and choices for consumer with different income and preferences. Consumer can select what criteria, cost and their personal preference and comfort.

Overall, the digital marketing has made the transaction easier than it was and online websites and application offers consumers benefits by providing them with more options of products and services that they can select from (Lim and Dubinsky 2004; Prasad and Aryasri 2009). Many traditional retailers offer specific products which is only available online to reduce their costs and to offer consumers with more options such as size, colors or features. So, consumers can select the product they desire into the online cart and the item will be delivered to their door. Moreover, online purchasing sometimes offer great plans (Amin 2009) and different option for the consumers. Consumers can select their payment method data and amount (Anonymous 2009) in their preference and convenience.

3.4.5 Perceived Risk

The amount of perceived risk by a consumer in considering a particular purchase is alluded to a perceived risk (Cox and Rick 1964). The researchers (Forsythe et al. 2006) have argued that perceived risk plays a critical part in performing and deciding consumer online buying behavior and anticipating his/her deliberate to online purchasing. The major factors of perceived risk in case of online consumer buying behavior are the following; financial risk performance risk, time risk and delivery risk. Whereas, social risk and psychological risk have no significant role in online purchasing (Masoud 2013; Nepomuceno et al. 2014).

Financial Risk: According to the previous studies, it has been found that consumers perceive the risk related with conceivable financial loss from online purchasing as more than the normal conventional purchasing (Bradley and Stewart 2002; Cox and Rich 1964; Wang et al. 2003). Researchers have studied that perceived risk toward online purchase is a core factor to be tended to the success of the digital marketing as it contains a negative impact on online buying behavior (Hoffman et al. 1999; Jarvenpaa and Todd 1996; Thakur and Srivastava 2015). Perceived financial risk is a critical negative impact on online business and acts as an obstacle in conducting online purchase (Bhatnagar and Ghose 2004; Liu and Forsythe 2010; Lu et al. 2005; Masoud 2013; Ruiz-Molina et al. 2009; Tong 2010). Subsequently influencing the selection of the online websites/channels (Thakur and Srivastava 2015). A study from other researchers (Swinyard and Smith 2003) expressed that approximately more than 70% of online consumer do not purchase online because of the risk of financial loss when purchasing from online vendors.

Performance Risk: Is related with how well the product or service will perform. A major confinement faced by online consumers is that they are unable to touch or try any products before purchasing it online. For numerous products, it is necessary to try or feel the product before actual final purchase which is difficult in online purchasing (Alreck and Settle 2002, Garbarino and Strahilevitz 2004). For instance, consumer perceive better level of product risk when obtaining online as associated with traditional stores (Dai et al. 2014; Goldsmith and Goldsmith 2002). This proposes that products and services and performance risk is like to impact on online purchasing (Bhatnagar and Ghose 2004; Lu et al. 200; Masoud 2013), regardless any product category (Dai et al. 2014).

Time Risk: This category is the potential loss of time and action for obtaining a corrupt purchase (Featherman and Pavlou 2003; Nepomuceno et al. 2014). Within the setting of online purchasing, this sort of risk its critical to the probability of such chance is related with the time and action in browsing, returning or product exchange (Forsythe and Shi 2003; Hassan et al. 2006). This risk happens to any technological problems in purchasing a product or service online (Hassan et al. 2006). Time Risk impacts the deliberate of the consumer to purchase online easily. Many consumers may have a fear in purchasing online due to the concern as delays or safety (Forsythe and Shi 2003).

Delivery Risk: Potential loss in delivery is related with product lost, damaged or delivered to wrong address (Masoud 2013). Some studies have been conducted that the risk of non-delivery products harmfully impacts online consumer buying behavior (Javadi et al. 2012; Masoud 2013; Zhang et al. 2012).

3.4.6 Perceived Usefulness

Perceived Usefulness is characterized as the degree to which consumer feel connected to the website, value and adequacy to them when purchasing online (Hu et al. 2009; Lai and Wang 2012). The perceived usefulness of a website depends on the effectiveness of innovative technology such as search engines, personal assistance and smart phones benefits to consumers (Kim and Tune 2010). Different information and high-quality products description should be given to the consumers to assist them in making the right choice (Chen et al. 2002). Concerns of price, quality, durability and other product related perspective are the key factor of consumer buying decision (Ahmed 2012). Referring to the researcher (Enrique et al. 2008; Kim and Song 2010; Xie et al. 2011), that perceived usefulness was demonstrated to have critical impact on the aim to purchase online. A supported research by (Kim and Song 2010) identified that consumer anticipation to get valuable information and to browse through products that are usefully to purchase. Else, the online consumer will move to their competitors since there are many websites and application that provides similar product and services (Kim and Song 2010). Briefly, perceived usefulness will impact the consumer aim to purchase in high risk condition (Xie et al. 2011).

Trust is another factor in perceived usefulness, that accepted to impact the online consumer buying behavior. Trust is a multidimensional concept because trust was based on balanced appraisal of an individual capacity and judgment on concern and generosity (Carlos Roca et al. 2009). In the digital environment, trust is essentially built in a person-to-website instead of through individual-to-individual communication, occurred by innovation (Limbu et al. 2012). Trust is vital because online consumers and retailers cannot actually see each other during transaction (Jiang et al. 2008). Lack of trust is primary reason why consumers don't purchase online (Limbu et al. 2012). Concurring to the researcher lee, et al. (Wei et al. 2010) the intention to purchase online is affected by the dependability and reliability of the online retailers. Unplanned disclosure of personal consumer information, information sharing with third parties, lack of consumer authentication, and access to the consumer's personal information may contrarily impact the intention to purchase online (Zhuo and Xiaoting 2010). The more consumer has trust

in online purchasing, the more they engage in digital shopping activities (Jiang et al. 2008). It provides valuable understanding to examine whether perceived usefulness and trust will influence the online consumer buying behavior.

3.4.7 Website Quality

Website quality along with consumer service and benefits have been described as a core “retailer characteristics” influencing the online consumer buying behavior satisfaction (Luo et al. 2012; Mishra and Priya Mary Mathew 2013). The perceived control in website browsing and product category are essential factors impacting the website quality. Studies have indicated that “consumer with high trust” that spend more time online and purchase more regularly the “return policy” cannot compensate the website quality (Bonifield et al. 2010). The website quality impact consumer perception of product and service quality, and also impact the online purchasing purpose (Sun et al. 2014). Signal validity is found to support the connection among website quality and products quality awareness for high quality websites.

The website serves as an essential point of contact for most of the retailers. They are used to deliver the information about the business or retailers, its products and services and the level of service the consumer can anticipate to get. Past studies have recommended that the quality of the website may impact the consumers and their attribution to purchase from the retailers (Ranganathan and Ganapathy 2002; Stop et al. 2004). The website quality refers to the whole quality of the website perceived by the consumer. The amount, accuracy, and the information about the product and services offered on the website many impact the consumer consideration to browse more time through the website and impact the intention to purchase its products and services.

However, consumers can be influenced by the image of the website when they want to decide on what site or retainers they should purchase from (Lim and Dubinsky 2004). Not only the businesses should create a safety website, but moreover they should to make it more attractive and more useful. Digital purchasing can alter a consumer into a buyer if they offer variety and useful information about the product and services, decent customer service and finally easy to access (Laudon and Traver 2009). The website should have sufficient information but not overwhelming. Providing unstructured or useless information in the website can diminish web usefulness and ease of use (Bigné-Alcañiz et al. 2008). Also, business and retainers should double check all the information in their websites to decrease mistakes and consumers misunderstanding. Information quality and image of the website is imperative effect of repurchasing (Koo et al. 2008). The motivation to purchase online will be low is the online store needs lack of searching, comparing and updated products. Online websites should make their sites to be simple for consumers to look at the product and services. Additionally, is digital stores need to change visitors into buyers, they should improve their websites by offering consumers a comfortable, coherent and interesting by developing quick website with useful plan (Broekhuizen and Huizingh 2009). Online payment process is other issue that should be important because, it influences the readiness to pay (Wang et al. 2005). Digital shops should make their payment method to be easy and secure. Hence, if online websites want to increase their consumers, they have to take care of the website design (Bigné-Alcañiz et al. 2008).

4 Conclusion and Upcoming Work

Consumer buying behavior is complex in nature. The variety of difference in consumer choice depends on the involvement and the buying behavior decision. The service providers within the marketing need to work intelligently to initiate the consumers. By keeping in focus, the factors affecting consumer buying behavior online and can make positive and consumer-oriented market. In the diverse world, the marketers need to be innovative and understand the consumer buying behavior (Kumar 2019). In this research, we found that there are 7 factors that affect online consumer buying behavior. These factors are Social Factor, Economic Factor, Customer Satisfaction, Availability of Products, Perceived Risk, Perceived Usefulness and Website Quality. The research also concludes that online digital marketing essentially impacts on consumer buying behavior. This was due that consumer usually give positive feedback and refer the product or service to others. Digital marketing appealed more consumers and consumer perceived is easy and fast way of purchasing. Consumer are cheerful with online purchasing because of the factors, and also its convenient consumer can access quickly on product and service and have an idea by comparing features, price and quality before purchasing process (Durmaz and Efendioğlu 2016). These factors are the most important for consumer buying behavior while purchasing online. Still, if the price on the internet and traditional store is almost identical, the consumer will give more consideration and interest on choice of product and services instead of the price. Also, if there is a decent consumer past experience, and that consumer is fulfilled with the product and service he/she will purchase more often and be loyal. This research will offer assistance for many consumers to recognize the advantages that online network is offering, and to realize there are other choices for purchasing rather than aiming to traditional stores, and may become an initiator for using digital marketing (Uzan and Poturak 2014). The crises have dramatically impacted our daily life, economy and consumer buying behavior around the world. The organization and marketers have to adapt to this lifestyle. The digital marketing has come to huge opportunity for marketers to respond and manage consumer buying behavior during the crises (Patel and Malpani 2020). Recently consumer is more persevering to purchase online because of the lockdowns, quarantine's and safety option. Thus, the consumer preference for digital gadgets, and platforms of gathering information easily purchasing and payment option proves that changes in consumer buying behavior during the crisis. Finally, this research will help the understanding of factors that affect the consumer buying behavior online for decision toward the product or service. The upcoming work of the thesis, will continue more on the factors affecting consumer buying behavior online in crises in the Kingdom of Bahrain in methodology section. The segment will focus on data collecting techniques and interpretation which will cover a part about online application in the region with a rapid investigation model that utilized to accomplish the aim and consideration on how digital marketing and online buying behavior of consumers in the current crisis in the Kingdom of Bahrain. The data will be collected by preparing organized questionnaire that will target consumers usage of the online application in a daily basis and to examine the independent and dependent variable. The next process will be discussion, data analysis and testing of hypotheses which will be divided into three section which will be descriptive analysis, validity of data and testing of hypothesis

which will be illustrated by using SPSS program in order to examine and identify the factors affecting the consumers buying behavior online during crises.

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The Impact of Customer Experience Strategy on the Buying Behavior on the Beauty Sector in Bahrain

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Abstract. The purpose of this study is to investigate the impact of customer experience strategy on the buying behaviour of Bahrain women customers towards beauty products. The quantitative method and descriptive research design is used for primary data collection consisting of consumer buying behaviour through the online structured questionnaire and data will be analyzed using Microsoft Excel and SPSS software. The respondents will be selected based on the sample size of $n = 385$. The findings of the study will be based on the outcomes via responded questionnaires. The current study will be subjected to sample size limitations, as the study will only be focused on women with specific age group and also the study is restricted to Bahrain. Besides, the survey method will be only used the quantitative method for primary data collection.

Keywords: Beauty products · Customer experience · Questionnaire · Buying behaviour · Bahrain

1 Introduction

In the global competitive environment, companies are trying to attract customers through offering a variety of products and services under customer experience strategy differentiating themselves from the other competitors triggering the customer experiences and creating stimuli of buying behavior (Kim and Sullivan 2019). The concept of buying behaviour were originated in mid-1950's in the marketing strategies focusing on the consumer buying behaviors and addressing the motivation of the consumer in the market. Under the customer experience and buying behaviours is critical for the companies for the long-term period as they have interacted with the customer focusing on different touchpoints using different media channels, and customer experience which is necessary for social experience requiring the firms to integrate their business function through developing and creating positive customer experiences (Lemon and Verhoef 2016).

Customer experience is based on the subjective response of the customers through direct and indirect contact of the company focusing on a different aspect of offering comprised of the advertising, and the customer cares, features, packaging, reliability, ease of

use which shapes the customer expectation and reflect the experience of the customers (Meyer 2007). The findings of the Bustamante and Rubio (2017) demonstrated that the determinant of the customers' experience is the cognitive, social, affective, and physical experience attracted by the stimuli for purchase decision-making, which also impacts the buying behaviour of the consumers. Marketers focus on consumer consumption and buying behaviors through creating a positive experience which indirectly impacts their behaviors of purchasing products and services; the findings of Esmailpour and Mohseni (2019) confirmed that the five dimensions of the customer experience including the cognitive experience, social experience, affective experience, behavioral experience, sensory experience have a significant positive impact on the consumer buying behavior (Esmailpour and Mohseni 2019). Bahrain's cosmetic and beauty sectors are estimated to be BD 70 million at the end of 2019 and have a vital contribution to the country's GDP. The country's beauty and cosmetic sectors are dependent on imports from foreign countries and are considered highly competitive because of high-quality cosmetics products and the tremendous customer experience in the Bahrain beauty sector.

2 Literature Review

2.1 Theoretical Framework

Theory of Reasoned Action

The theory of reasoned action is the consumer behaviour theory focuses on the relationship between marketing and consumer attitudes in bringing purchase intention decisions. According to this theory, consumers only act on the specific behaviors, in a way that, they believe will create or receive a particular outcome through rational decision making which moves toward final purchase decision of products or services. The theory of reasoned action is the predictor tools for the examination of the purchase intention of the consumers focusing of the favorable outcomes and attitudes (Belleau et al. 2007). The application of this theory in this study is that, consumer always take specific action, when they are given reason for the belief for the specific outcomes and then customer take decision in moving forward for the final decision in term of purchasing the items through completing the action with changing their minds and adopting different course of action during the buying behavior. This theory is applicable in this study because its predictor of the consumer buying behaviors.

Social Learning Theory

Social learning theory based on the attitude, behavior and the observation and emotional reaction of the other persons in the society which influence the behavior and the human learning and cognitive factors. The theory was developed by Albert Bandura in 1977 through confirmation of the behaviorist learning theories (Seel 2012). The social learning theory is the basis for the sociological models of the consumer behavior emphasize on the consumer learning behavior from their experience, observing the response of the other customers through hearing their views and opinions in the peer groups. The theory based on the social learning and experience of the consumer which influence their buying behavior and patterns of learning (McGregor 2009). The application of this theory in

this study is that, social learning theory apply on the social experience of consumer in their buying behavior through actions of the other consumers and observations which indirectly impact their buying behavior.

2.2 Buying Behaviour

Definition

“Consumer buying behaviour is the study of way buying and disposing of the goods, services, ideas and experience by the individual, groups and organization to satisfy their wants and needs” (Kotler and Keller 2011).

The concept of consumer buying behaviour were emerged in 1940s and 1950’s under the marketing strategies of the companies focuses on the consumer buying and accessing the valuable information through motivating the consumer and addressing the consumer behaviour in the market. Al-Khalif et al. (2021) studied the purchase behaviour during the covid-19 pandemic in Bahrain, focusing on consumer habits and buying and shopping habits. The findings demonstrated that product availability, pricing, easiness towards purchasing, product details, and social media significantly impacts buying behaviour in Bahrain (Al-Khalifa et al. 2021).

Ramya and Ali (2016) studied the factors impacting consumer buying behaviors, focusing on selecting, consuming, and purchasing goods and services. The study’s findings demonstrated that shopping habits, purchasing behaviors, and consumer brand awareness impact their decision-making process (Ramya and Ali 2016). Hayat and Victor (2020) studied the buying behavior of consumers in the electronic industry of Bahrain while assessing the consumer buying behaviors, where the findings demonstrated that learning, motivation, perception, behavior, attitude, and economic values significantly impact the consumer buying behavior in the electronic industry in Bahrain (Hayat and Victor 2020).

Anjana (2018) studied factors impacting the buying behaviour of consumer in cosmetic industry. The study was conducted through encompassing the factors impacting the buying behaviour of consumer for the beauty care products. The findings of the study demonstrated that, advertisement, pricing, quality of products and the packaging have major influence on the consumer purchasing behavior in the cosmetics and beauty industry (Anjana 2018).

The above literature related to the customers’ buying behaviour towards beauty products revealed that brand awareness and shopping habits greatly impacts the customers’ decision-making related to buying behaviour and purchase intentions. The reasoned action theory (RAT) mainly focuses on the relationship among the consumer attitude and marketing in making the decisions of purchase intentions. Therefore, the reasoned action theory is supportive for the buying behaviour of customers towards beauty products.

2.3 Customer Experience

Definition

“Customer experience is a multi-dimensional construct linked with the consumer cognitive, behavioral, emotional and the sensory and social responses the firms offer during the purchase journey”.

Customer experience is one of the highly involved traditional concepts in the purchasing process since 1965, focuses on the interaction and steps between the company and the individual before making purchases which delivers experience and reaction (Laming and Mason 2014). According to Bustamante and Rubio (2017), customers’ responses are evoked by the store stimuli during the customer visit to the physical stores, which expect to create cognitive, physical, social, and affective experiences, reflecting psychometric properties of the customers (Bustamante and Rubio 2017). All of the factors united to create the customer experience, these customers responses to the suppliers. The customer experiences extends the entire phases of the consumer journey due to the supplier environment, whether produced in various marketing touchpoints or in the stores of beauty products, impacts the consumer perceptions of the suppliers and choices (Roggeveen et al. 2020).

Ameen et al. (2021), claimed that the customer experience’ cognitive factors refer to speed, functionality and avail availability of the services. Moreover, previous findings demonstrated that the emotional features of the customer services might be complex in nature. Such type of feelings might be either negative or positive such as regret, delight, outrage, surprise, anger or joy (Barari et al. 2020).

Koetz (2020) studied customer experience management, focusing on beauty retailer shops. The study was conducted using case studies analysis based on the press release, the beauty products blog content, social media, companies’ website, and mobile applications. The study’s findings demonstrated that the consumer’s shopping experiences is because of the bonding, and reward loyalty and through promoting the social shopping experience where the customer experience a high correlation with the buying behaviours and the customer loyalty.

The above literature from previous studies found that the customer experience greatly impacts the customers’ buying behaviour towards the beauty products. Moreover, the theory of reasoned action greatly supports the customer experience towards the buying behaviour of beauty products. The findings of the study revealed that the customer experiences are due to their bonding and customer loyalty.

2.4 Factor Impacting Buying Behavior

Social Experience

Definition

“Social experience demonstrates the social interaction and the individual process aspect being part of the customer experience, which seeks social benefits by achieving a deep sense of their social involvement in the sale process and buying behaviour” (Pawar and Naranje 2016, page 8).

Social experience of consumers is attracted with the social influence which relate to the consumer behaviors in terms of product consumption. The social networking of consumers strongly impacts their purchasing opinion and behaviours. Barber et al. (2012) investigated the psychographic assessment of the consumer's purchase behaviour while collecting data through an online survey questionnaire. The study's findings concluded that consumers having high social interaction with the other consumers have higher purchase intention and motivation than the customer having lack of social interaction in their communication and purchase intentions. The findings further concluded that consumers have higher purchase intention or behaviour for the friendly environment impacting their attitude and behaviors towards the shopping environment (Barber et al. 2012).

Clarke et al. (2012) investigated the store environment of the fashion stores in North West England, focusing on the sensory environment of the small boutique's stores through using sensory in-store experiences while taking photography with follow-up interviews. The findings revealed that not the tangible thing impacts the consumer's shopping experience. Still, the store's traits, including lighting, smell, and the presence of the managers or owners, influence the social experience of consumers and buying behavior. The sales environment is important for providing space for social experience, communication, and interaction (Clarke et al. 2012).

Handarkho (2020) studied impact of the social experience on the customer purchasing decision in the social commerce environment. The sample of the study were comprised of 288 responses from Indonesia focusing on the perceived behavior of consumers. The findings of the study concluded that, parasocial interaction is the strong determinant in the purchase intention and buying behavior of consumers followed by the peer communication and the herd behavior (Handarkho 2020).

Nasermoadeli et al. (2013) examined the impact of the customer experience on the purchase intention of consumer. The study used 330 respondents focusing on the social and emotional experience of the consumers. The findings of the study demonstrated that, social experience and the emotional experience have significant positive impact on the purchase intention of consumer. The findings further revealed that, social experience mediate the relationship between the purchase intention and emotional experience as well (Nasermoadeli et al. 2013).

The above literature studies found that social experience greatly impacts the buying behaviour and purchase intentions of the customers. The findings based on empirical evidences related to social experiences demonstrated that the customers' social network greatly effects the purchasing behaviours ad opinions of the consumers. While, the previous studies also found that the social experience factor is greatly linked with the social learning theory.

Cognitive Experience

Definition

"Cognitive experience is the psychological basis of intellectual giftedness and representation where, how the individual sees, understand, interprets the surrounding reality" (Shavinina and Kholodnaja 1996).

Customer cognitive experience is generally linked with the cognition which are formed through direct interaction with the companies offering in the form of products and services and the retail environment and process that information collected through online or word of mouths, comparing them with their memories impacting their buying behavior (An Hai Ta and Litovuo 2022). Cognitive experience is the innovative way of targeting consumer intelligence and creating awareness to create a different experience. Under the psychometric properties of the buying behavior, cognitive and the affective and the physical experience of the consumers are the significant factors that impact the buying behavior of consumers (Bustamante and Rubio 2017).

Liang and Lin (2018) investigated the influence of the product patterns on consumers' purchase intention while using the likelihood model. The sample of the study was comprised of 205 respondents. The study's outcome revealed athlete endorsement of products enhanced consumer purchasing intention. The findings concluded that consumers interpreted the product features and information, which increased their cognitive experience, which have an important role in the determination and increasing the buying behavior of the consumer (Liang and Li 2018).

Alnawas and Hemsley-Brown (2018) studied the cognitive and emotional elements of customer experience on the customer buying behavior. The study collected data from 843 respondent through online panel in the UK while using the structural equation model, the findings of the study concluded that, cognitive experience have significant impact on the consumer cognitive outcomes which leads to purchase intentions as compared to the emotional outcomes (Alnawas and Hemsley-Brown 2018).

The above literature based on empirical evidences found that cognitive experience significantly impacts the customers' buying behaviour. The previous studies found that the customers perceived the information and features related to product, which enhanced the cognitive experience as significant role in determining and developing the customers' buying behaviour.

Affective Experience

Affective experience reflects the emotions and feelings obtained from the interactions with stimuli and external settings. These two aspects have been intellectualized in different ways such as hedonic and utilitarian addition to intrinsic and extrinsic dimensions (Akram and Kortam 2020). In other words, an affective experience refers to feelings and emotions of the customer which impacted by different parts of the brand, product and services while interacting with them.

Shahpasandi et al. (2020) studied impulse buying behaviour while addressing the flow of information and hedonic browsing. The study was conducted on 635 respondents using consumers' cognitive and affective experiences. The study's findings showed that cognitive experience and affective experience positively impact consumer buying behaviour and online impulse buying (Shahpasandi et al. 2020). Affective experience is considered as one of the important elements in the consumer decision-making process in terms of products and services.

According to Emaeilpour and Mohseni (2019) studied effect of the customer experience on the consumer buying behavior. The study employed survey questionnaire and data were collected from 385 consumer of fast stores and restaurants through convenient sampling method in Iran. The findings of the study demonstrated that, affective

experience of the consumer has positive significant impact on the purchase intention. The outcomes of the study further elaborated that, affective experience of consumer is the feeling and affection of consumer in receiving with the products and services and dependent upon the environmental signs (Esmaeilpour and Mohseni 2019).

All of the above previous literature were based on empirical evidences which revealed that an affective experience positively impacts the customers' buying behaviour. While, there are limited studies on the effective experience factor in relation to the customers' buying behaviour. Therefore, the findings of the study revealed that there is a literature gap among the customers' affective experience and buying behaviour of the beauty products.

Hedonic Aspect

Definition

"Hedonic aspect is the consumer experience based on the psychological needs including the prestige, satisfaction, emotion and subjective feeling and sensory pleasure" (Roz 2021).

The hedonism aspect of the consumer and its impact on buying behavior were originated 50 years ago in the marketing studies focusing on the different consumer theories which demonstrated that, hedonism is the value of the expression. Haq and Abbasi (2016) studied the hedonic consumption experience and consumer buying behaviour in the fashion industry. The study was conducted on 231 consumers having fashion shopping product experience through survey method. The outcomes of the study demonstrated that the hedonic experience of the consumer in terms of fashion orientation have a significant positive impact on the purchasing behaviour of the consumers because of the emotional attachment and hedonic consumption (Haq and Abbasi 2016).

Tarka et al. (2022) studied the role of the hedonistic shopping experience and the buying behavior, and consumer personality. The sample of the study was comprised of 363 adults where the findings concluded that agreeableness and conscientiousness under the hedonistic shopping experience have a significant positive impact on the buying behavior of consumers (Tarka et al. 2022).

Kang and Park-Poaps (2010) studied the hedonic aspects of consumer and its impact on the buying process through focusing the product or services and different motives for seeking the pleasures of shopping. The findings of the study demonstrated that, hedonic shopping aspects of the consumers have significant impact on in the buying behavior of consumers (Kang and Park-Poaps 2010).

Kazakeviciute and Jurate (2012) examined the relationship between the perceived hedonic values and the consumer behaviors focusing on the hedonic aspects. The findings of the study concluded that, social, emotional and the epistemic factors are majorly involving in the hedonic aspect which impact the consumer behavior and the intentions (Kazakeviciute and Banyte 2012).

3 Conclusion

The findings of the literature found that there was significant impact of hedonic aspects on the buying behaviour of customers. While, emotional, social and epistemic factors

were also involved in the hedonic aspect that greatly effects the buying behaviour of the customers. Additionally, conscientiousness and agreeableness under the hedonic aspects were also found positively significant impact on the customers' buying behaviour.

All the above discussed studies of previous literature were based on empirical evidences and consisted of various results due to customer perceptions and cultural differences. Moreover, because of the range of sample selection methods, the findings of the studies were subjected to the sampling bias and were not generalized. The findings of the literature also demonstrated the literature gap between the buying behaviour and customers' attitude and their experiences which denotes the demand for further study in the beauty sectors.

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The Impact of Online Banking Services on Customer Spending Behavior

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Abstract. This paper is aimed on examining and testing the effect of mobile banking services on customer spending behavior and the changes caused by this influence of the COVID-19 pandemic in The Kingdom of Bahrain. In this study, the online banking services is the independent variable, where customer spending behavior is the dependent variable, COVID-19 pandemic is the moderator variable of the study. The study is focused on examining and testing the impact of the online banking services toward the consumer spending and saving behavior on making decision either to buy or save. The data will be collected in a primary form where the questionnaire survey method will be adopted to gather responses from bank consumers in the Kingdom of Bahrain and will be analyzed through the Statistical Package for the Social Sciences software (SPSS) tool by using the built-in functions such as regression, mediation, scale, correlation, coefficient, significant, and moderation analysis. The results of the study will show the acceptance and rejection of the hypotheses of the study.

Keywords: Online banking · Consumer spending behavior · COVID-19 pandemic · PEST · BENEFIT · F.A.W.R.I.+ · F.A.W.R.I. · Kingdom of Bahrain

1 Introduction

As the technological growth is moving fast in innovating, the banking sector in many develop countries are using the electronic banking as a distribution channel (Farida 2019). The banks provide the freedom to the customers to integrate in the self-services for doing a certain types of transactions (Farida 2019). Online banking service is a method the bank use to communicate with the customers to provide information and services through the internet such as preparing, managing, and controlling the financial transactions. The Mobile banking allows the customers to view their bank accounts to do financial transactions like transfer the money from the account and purchasing financial goods or services by using the online channels (Karjaluo 2002).

The online banking services require internet services and infrastructure which was established in 1995 in Bahrain. In 2010, around 55% of the population had access to the internet. In 2014, over 90% of the Bahraini citizens are connected to the internet as

stated in the World Bank website. Later in 2015, this percentage rose to 96.4%, and as a result, the Kingdom of Bahrain now has the highest internet penetration rate in the Middle East (Internet in Bahrain – BIS).

Bahrain's banking sector was given the leading role regionally and globally, it was expected that the banks in Bahrain will move rapidly to be in the front lines of the new era of banking services. Emerging technologies could be used to enhance financial performance and offer customers a whole new service experience (Bahrain Rises to The Challenge 2018 Global Finance p. 73).

The rapid development in digital banking and payment platforms, as well as consumer preferences shifting towards cashless financial services has resulted that the adoption of online banking in Bahrain has been risen with the bank accounts which linked to the internet by increasing from 286,000 accounts to 534,000 accounts in latest years (Oxford BusinessGroup).

In the period the spread of COVID-19, consumer spending and saving behaviors has been changed. The flexibility methods of payments in the lockdown restrictions increased the spending on non-essential retail and hospitality products. Moreover, consumers start buying the grocery through the online channels during the lockdown restrictions as the groceries start providing these services through their own designated mobile applications. These behaviors had changed the shopping and payment habits during the COVID-19 away from the cash toward the online payments. Also, the spending has been declined on the dining-in restaurants, travelling in the holidays and shopping in the stores which forced the consumers to redistribute their income to save more than before (Alex Davenport 2020).

2 Literature Review

Many factors must be considered when analyzing the impact on the global banking markets. Traditional bank branch networks have shrunk due to advances in information technology. Customers of banks are divided into two groups. The first category includes older clients who are regarded typical branch customers, while the second category includes younger consumers with a high level of education and a professional vocation who are considered typical internet banking users.

Rapid technical advancements in online banking push banks to assess themselves in the market and compare their performance to that of their competitors. Internal and external pressures affect this industry. The PEST analyses were utilized to make this comparison. It's utilized to normalize the four elements in terms of the bank's financial status. The P E S T evaluations assist the bank in determining how these four primary aspects will affect the bank's long-term functioning and operations. This model is frequently used in conjunction with other analytical methods such as Porter's Five Forces and SWOT analysis to provide a comprehensive picture of the situation and its relevant internal and external elements. The PEST analysis can be defined as a part of an analysis conducted on external factors that influences the activity of an organization. This analysis focuses on four principal's components of strategic significance in the macro-environment level. These factors are political, economic, social, and technological (Bîrsa 2016). Economic and political changes have strengthened the power and rights

of the customer, whereas legislation has increased competition in the financial services industry. Social environment changes include the emergence of mature bank customer segments. The cultural values, beliefs, and attitudes has been changed regarding the transformation of technology and toward the society. The transformations in technology involve the quick development of information technology and the effect of this on the banking sector in total (Karjaluo [2002](#)).

Michel Porter Five Forces is an internal analysis which consists of supplier and customers bargaining power, threat of new entrants and substitutes and internal competition (Karjaluo [2002](#)). The Five Competitive Forces are the rival competition from the sellers of other organizations within the industry, competition from new potential entrants which increases the number of rival competitors, competition from producers of substitute products, supplier bargaining power, and customer bargaining power.

SWOT analysis has an exceptional characteristic nature which allows improvement of an analysis of previous and future conditions of the organization, its operative areas and helps shaping the predictions for long-term development of the organization and respective areas (Raluca [2013](#)).

SWOT is a technical term for examining an undertaking's internal variables, strengths, and weaknesses, as well as external aspects, opportunities, and threats (Pant [2019](#)). Strengths are internal organization skills that give the competitive advantage among the other organizations in the market. Weaknesses are internal weak points which results competitive disadvantages. Opportunities are external occasions that give the organization advanced elements to get benefit from a particular course of actions. Threats are external elements that prevents the organization to keep their course of actions (Raluca [2013](#)).

A SWOT analysis is a matrix which is commonly used to illustrate and create a SWOT analysis. It is a crucial tool for understanding and making decisions in a variety of commercial and organizational scenarios. Aside from that, it's a common way to collect, organize, present, and review anticipated data inside a large business or during the project planning process. Strengths indicate competencies that give an organization a competitive advantage over similar organizations, whereas weaknesses describe traits that give a business a competitive disadvantage. Similarly, opportunities represent a combination of external components that are significantly beneficial to an organization, whereas threats represent a combination of external elements that cause major damage to an organization in the context of maintaining its course of action. (Pant [2019](#)). The mobile banking services strengths are accessible anytime, fast transaction with a low cost, competitive advantage for economies of scale, and provide better convenience and efficiency. The weaknesses may occur in the security, availability of the internet access, and may not be used by all customers. The opportunities to be arise like integration of domestic banks with foreign markets, develop many areas such as risk management, develop a better system to avoid any failure, and this will raise the awareness of the benefits of mobile banking services. The threats in the mobile banking services are cybersecurity related issues, high competition, and lack of customer loyalty (Oleg et al. [2020](#)).

Banks and customer are getting many benefits from the online banking. The main benefits to banks are cost savings, reaching new segments in the market, efficiency, enhancement of the bank's reputation and better customer service and satisfaction.

Online banking offers new value to customers as it avails a full range of services at any time upon customer convenience.

The introduction of new banking technologies has resulted in intense market competition, which has had a significant impact on consumer behavior. Customers' requirements and views about technology in general must be better understood by online banking providers. If they succeed, banks will be able to influence and even control customer behavior, which will become a huge concern in the future when it comes to gaining a competitive advantage. (Karjaluo 2002).

Mobile banking is defined as the use of mobile devices, such as smartphones or tablets, to conduct banking transactions. Furthermore, mobile banking, which integrates the bank with telecommunications services, is now the most modern technique to providing financial services. Mobile Banking Services are critical in almost every economic sector, including personal life, particularly as a way of delivering financial services. The services are convenient, comfortable, and rapid. Furthermore, the user can do any form of online transaction at any time and from any location. Many variables contributed to the adoption of mobile banking applications, including utilitarian expectation, hedonic incentive, status gain, habit and privacy concerns, usability, and social impact. (Sunday Adewale Olaleye 2022).

The mobile banking services provided by banks are many such as fund transfer, bill payments and online shopping. EFTS, the Electronic, Fund, Transfer, System, is a system that links all commercial banks electronically to increase the effectiveness of fund transfers and payments (Ciolacu Beatrice 2008). (Sardana 2018) The Electronic Fund Transfer System are devoted towards transfer of funds within a financial institution or among many institutions, without the involvement of bank employees. This type of transaction takes place over an automated network. EFTS include fast wholesale payments via a variety of methods, depending on the country where the bank is located. International banks are conducted automated transmission of payments messages by the Society for Worldwide Interbank Financial Telecommunication (SWIFT) (Barbara Casu 2006).

Local banks in Bahrain are using BENEFIT. BENEFIT is an electronic payment system provide services such F.A.W.R.I., F.A.W.R.I. + and F.A.W.A.T.E.E.R.. F.A.W.R.I. + is a near-real time electronic fund transfer service. F.A.W.R.I. is a postponed payment electronic fund transfer service. F.A.W.A.T.E.E.R. is an Electronic Bill Payment and Presentment (EBPP) and it provides a single gateway and hub connecting all banks and billers together in one centralized platform. In 2021, the number of transactions in F.A.W.R.I. reached 9.6 million transactions, 140 million transactions in F.A.W.R.I. + and 9.1 million transactions in F.A.W.A.T.E.E.R. (<https://benefit.bh/> 2022). Bill payment is a service that allows the customer to pay a different type of bills through the bank. It allows the customer to manage a various payment for a various merchant in one payment. In Bahrain, this service is available in the mobile banking by using a direct payment or direct debit service. Direct bill payment combines bills from different billers into a single interface for the customer. F.A.W.A.T.E.E.R. provides real-time bill payments and enquires which lets the customer to pay the bills within 30 s. Moreover, it also offers a deferred payment to billers without the need for integration. Direct debit service provides real time bill payments and allows the customer to pay the bills within

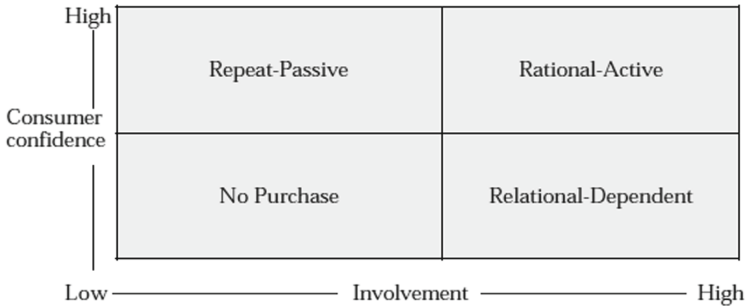
30 s. Moreover, it also provides a deferred payment to billers without the need for integration (<https://benefit.bh/> 2022). The online shopping is a form of e-commerce where consumers buy product or service through the internet directly. The growth on electronic service and the improvement of digital technology had affected the consumer behavior. Consumer started using online shopping instead of visiting the stores because it is more convenient and faster (Fedork 2021). The online shopping in Bahrain takes place among the majority of population. Regardless of the age and interest, people start to use online shopping regularly, through both the website and social media (Ali Hussein Zolai 2018). The online shopping products and services had grew rapidly during the COVID-19 in Bahrain. Many of the retailers took advantages by establishing a new application to serve the customers. These retailers including the food, grocery, clothes, electronic equipment and so on (Alex Davenport 2020) (Ali Hussein Zolai 2018). In Bahrain, majority of banks integrated the BENEFIT mobile application to ease the payment methods for online shopping. The application provides the need for safe and seamless transactions without the use of cash and cards. The transaction is safe, secure and very convenient (<https://benefit.bh/> 2022).

The mobile banking services has impacted the consumer spending behavior. The consumer behavior definition is “the mental, emotional, and physical activities that people engage in when selecting, purchasing, using, and disposing of products and services so as to satisfy needs and desires”. The communicating actions among the seller and the buyer is consider as a consumer behavior. The key factor of this communication is the alternative implemented by the buyer (Karjaluo 2002). It is important for the banks to understand the variables which influence customer’s decision to use mobile banking services and become more loyal toward these services (Kwee Kim Peon 2021). The consumer behavior toward mobile banking services has been increased significantly in the last decade. In the financial service business, there is a need to test and examine the consumer behavior in the economy toward the psychology research. To apply the test, a matrix has been developed to link the consumer behavior with the psychology literature. This matrix will improve the process of detecting consumer behavior towards saving or spending within a general framework. The matrix shows the relationship between the customer confidence level and the participation of the customer in the financial products. The consumer spending and saving characterized by four standard categories of consumer behavior, passively repeated, actively rational, no decision taken and dependently rational (Karjaluo 2002).

The Repeat-Passive indicate that a small sample of involvement in monetary goods or services, but large consumer involvement of buyer assurance. This type could be described as passive in the replicated involvements as buyers are not searching for substitute monetary goods or services. This type of consumers choose their banks based on the geographic physical place of the institution either it is near their house or theirs offices. Also, the impact of community groupings, like friends or the members of their family, seemed particularly hugely impact their decisions (Karjaluo 2002).

The Rational-Active indicate that a large involvement of participation in monetary goods or services and a large sample of buyer’s assurance. This kind of buyers seemed to consider price as a vital element to choose a financial product provider, the bank. The delivery channel to be used by the consumers in this type play an important role. On

average, this kind of buyers used mobile online banking services or telebanking. This kind seems to be at a low level of being faithful to monetary institution than repeat-passive types. Moreover, this type of consumers has a less communication with their bank (Karjaluoto 2002).



The No-Purchase represent the buyers who do not buy and they don't involve in any monetary transaction such as buying a monetary goods or services through the online platforms. This type is not involving with the monetary product and don't have the capability or the trust to make a choice by using the mobile banking channels. Nevertheless, a quantum amount of promotions activity and campaigns are focused on this segment, as an effort to expand their knowledge of monetary services and products and influence them to use the mobile banking services (Karjaluoto 2002).

The Relational-Dependent, displays high participation of the customer in the financial products but low consumer assurance because they find it very difficult to make use of the product and have concerns about the eventual results. This type of consumers will need guidance and assistance from financial institutions such banks or third parties to decrease the difficulties and build their pattern of buying. This kind of buyers shows that they had an issue of trust and awareness with regards to the choosing among alternatives for monetary goods and services. The bankers who deal with this kind of buyers should take in consideration the foundation of relationships and make conversations and consult their consumers, where consumers can ask for an advice (Karjaluoto 2002).

To conclude, the banks need to use the consumer behavior matrix in-order to help them to know their customers. The type of the financial product has an impact on the consumer purchasing behavior. In addition, the providers of financial services need to emphasis the trust level for their customers to gain their trust to participate in the financial products services through the mobile banking channels. Also, banks most implement strategies to retain and maintain their customers and increase their profitability. The main reason for this is that many competitors in the financial services market are developing new technologies through their delivery channels which might lead the customers to switch their financial services provider (Karjaluoto 2002).

Spending and saving are the two key components of customer behavior when it comes to using mobile banking services. A consumer is a person who purchases products and services from businesses to consume them (Michael Baye 2018). Individual customers have legal, time, physical, and financial constraints while making decisions. Budget

constraints limit customer behavior by forcing them to choose an affordable package of products and services. The amount of money a consumer spends and saves is determined by his budget. Many things influence a customer's budget, including income and the cost of goods and services. To clarify, a budget set is a collection of products and services that a consumer may buy. The budget set refers to the mix of products and services that a customer may purchase. The consumer's spending on products and services must not exceed his or her income. If a customer does not spend his entire salary, he has a savings account for the amount remained (Michael Bay 2018). The consumer spending categories are groceries, clothing, transport, holiday, restaurants, entertainment, bills, taxes, school fees, financial services, and cash withdrawals (Alex Davenport 2020). During COVID-19 pandemic, the value of payments through the electronic financial transactions reaches 20 billion Bahraini Dinars. The payments made through EFTS has increased by 164% with a total of 159 million transactions with a value of 20 billion Bahraini Dinars. The increase in transactions was 26%. F.A.W.R.I. + transactions reached 140 million transaction which represent an increase of 196% with a value of 4.4 billion Bahraini Dinars which represent a 97%. F.A.W.R.I. transactions reached 9.7 million transactions that shows an increase of 11% with a value of 15.2 billion Bahraini Dinars which represent an increase of 14%. F.A.W.A.T.E.E.R. transactions reached 9.1 million transactions which shows an increase of 117% with a value of 640 million Bahraini Dinars which represent an increase of 38%. The BENEFIT PAY application users has increased by more than 200,000 users. Moreover, the fuel payment transactions have increased by 134% (BENEFIT 2022). This numbers clearly shows the impact of the COVID-19 towards the consumer spending by using the mobile banking channels. There are many factors that influence the Bahrain citizen purchasing behavior such as the ease of use the online shopping applications and the convenience payment methods. Also, the satisfactions from the perceived product or services have significantly increase this behavior. Moreover, the low-risk and the high confidence of the consumers has increased the online shopping and payment during the COVID-19 pandemic (Ali Hussein Zolai 2018).

The consumers have been forced toward saving during the COVID-19 pandemic due to many reasons such as economy lockdown, consumer spend toward substitute products or services that provided with a lower price, and the reduce usage of transportation (Alex Davenport 2020). The spending groups could be categorized to four groups; unaffected group which remained open even through the lockdown such as groceries. Affected groups which have different methods to serve their customers such as clothes shops which close the physical stores but still offering online shopping. Fully shutdown that were entirely shutdown with no substitute such as childcare. Cash withdrawals, many businesses stopped accepting cash payments because of the limitations of depositing the cash in the bank accounts. The decline in spending and the increase in the income has increased the number of savings (Alex Davenport 2020).

3 Conclusion

As the previous study results reveal that the online banking services in the Kingdom of Bahrain is a sufficiently role player in impacting the consumer's spending and saving behavior where they are provided with a strong technological infrastructure, an excellent bank services, and an awareness and knowledge of how to spend and save money

eventually resulting to an increase in the involvement of the online banking services and have a stable financial situation. The study found that the bank consumer in The Kingdom of Bahrain is using the online banking services more than before since they have the required resources and capabilities and this impact their spending behaviors towards buying goods and services. Likewise, the role of the COVID-19 pandemic has been considered as a role player in impacting the overall spending and saving behavior of the bank consumers in The Kingdom of Bahrain by using the online banking services. This suggests that when there is a problematic situation, the consumers behavior towards spending or saving their money are more involved in the online banking services due to the increasing of the impressive role of the availability of resources and capabilities provides by the financial institutions.

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The Professional Competencies and Its Relationship to Emotional Intelligence of the Faculty Members at Al-Quds Open University

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Abstract. The current study aims at identifying the level of emotional intelligence among the faculty members at Al-Quds Open University in Palestine, and to reveal whether there is a correlation between the level of professional competencies among the faculty members at Al-Quds Open University and the level of their emotional intelligence. The descriptive analytical approach was adopted by the researchers. For the data collection, the researchers designed a questionnaire on a sample of (84) faculty members who were chosen randomly from Al-Quds Open University in the Gaza Strip branches. The results showed that the level of professional competencies of the faculty members as well as their emotional intelligence is very high. Also, there is a positive statistically significant relationship between the level of teaching competencies, technological competencies, human competencies, evaluation competencies, professional competencies and the level of emotional intelligence. In light of those results, some recommendations were produced.

Keywords: Professional competencies · Emotional intelligence · Faculty members · Al-Quds Open University of Palestine

1 Introduction

Nations and societies always strive for advancement and progress by paying attention to their educational system, developing and improving it in all its stages, the teacher is the cornerstone of the educational system, and attention to him is a top priority, accordingly, universities began to focus on the quality of teaching performance of faculty members, so they established training centers that offer a variety of courses, providing teachers with some of the skills that help them in university teaching, including courses related to teaching methods and evaluation, others about the use of modern technology in university teaching, and others concerned with communication skills and social and personal relations, to develop the capabilities of university teachers in various aspects.

In this regard, Al-Shammari (2019) and Al-Jabr (2014) confirm that university teaching is more complex and comprehensive than teaching in general education schools, and

this is due to the multiplicity of tasks and responsibilities of a university professor on the one hand, and the high levels of skill and knowledge required to be achieved by students on the other hand. The matter also increased the importance of entering quality and international standards as a tool for the level of education and the high levels of performance that this requires to achieve distinct outputs.

The current study finds that the faculty member's possession of the skills of communication, and social and personal relations at the university may be one of the most important skills that a university professor must possess because it is an essential and authentic pillar of professional competencies and emotional intelligence that a university faculty member must possess on the one hand, and students on the other, and because it may have a significant impact on promoting and reaching the anticipated objectives from the university education. Accordingly, the gap to be narrowed down in this investigation was determined by identifying the level of professional competencies as well as the level of emotional intelligence of the faculty members besides revealing the level of professional competencies and its relationship to the level of emotional intelligence among faculty members at Al-Quds Open University.

1.1 Objectives of the Study

The objectives of the study are presented in the following:

1. Identifying the level of professional competencies of the instructors at Al-Quds Open University in Gaza.
2. Identifying the level of emotional intelligence of the instructors at Al-Quds Open University in Gaza.
3. Determining the relationship between professional competencies and emotional intelligence among the instructors at Al-Quds Open University in Gaza.

1.2 Significance of the Study

The importance of this study is derived from the lack of similar studies that dealt with the level of professional competencies and its relationship to the level of emotional intelligence among faculty members in Palestinian universities. This study may help those in charge of the universities decision makers, especially the university administration, to develop the emotional intelligence and the various competencies of the faculty members through holding training courses for them, which contributes to providing them with the necessary competencies in various disciplines and practicing all the necessary competencies to achieve the mission of university education and based on the foregoing, the study problem was identified.

1.3 Terminology of the Study

Professional competencies: is a set of cognitive abilities, teaching skills, technology assessment and human relations practiced by the instructors at Al-Quds Open University to achieve the goals of the educational process in all its multiple aspects.

Emotional intelligence: It is the degree obtained by the instructors at Al-Quds Open University on the emotional intelligence scale, which included five areas: managing emotions - empathy - self-motivation - knowledge - emotionality - and social communication.

Faculty member: refers to the male and female instructors who teach at Al-Quds Open University (QOU) in Gaza Strip in all faculties and various disciplines and hold various academic ranks.

2 Theoretical Framework

General intelligence contributes at the highest rate of (20%) only to one's success in his personal and work life, though other factors, the most significant of which is emotional intelligence, contribute by (80%), as mentioned by Abdul Nabi (2001) and this is confirmed by the results of studies conducted by (Gardner 1983), Mayer and Salovey (1990), and Stirlingberg (1996), where it became clear that general intelligence contributes to rates that fluctuate between (4%, 10%, 25%) of the individual's performance variance, while the remaining percentages are attributed to emotional factors.

Some studies indicate that general intelligence alone does not guarantee individual success and superiority. Rather, the individual needs emotional intelligence, which is the key to success in various fields of which the scientific, practical and educational field is an integral part. Emotional intelligence also helps to resolve conflicts (Al-Shawa 2015). Abu Afash (2011) stated that emotional intelligence helps in the process of training and teaching at its various stages, and in making the right decisions. In this regard, emotional intelligence is related to the quality of the individual's social relationships and is linked to the positive relationships of friends, also individuals who are more emotionally intelligent are more capable of social adjustment and sociability, and they are also better in terms of mental and physical health, and are more concerned with their outward appearance and more academically superior.

2.1 Components of Emotional Intelligence

Luthans (2008) believes that emotional intelligence consists of several components, including self-awareness and social awareness, managing interactions and emotions, self-motivation, and social skills. In this regard, Abu Amsha (2013) believes that emotional intelligence skills make the individual more effective, so he must possess five skills:

- 1 The ability to take responsibility.
- 2 Finding a variety of flexible options to face different situations.
- 3 Accept the views of others and the formation of social relations.
- 4 Work effectively to find the best possible options for each case, especially effective decisions.
- 5 The insistence on creating self-determination, self-respect, and a sense of personal effectiveness.

2.2 Previous Studies

Based on reviewing the related literature, the current study found that there is a diversity in previous studies in terms of purpose, most of which referred to the identification of emotional intelligence and its relationship to professional competence, such as the Owaisi study, Abu Aqil study (2019), Wahyuddin study, Abu Al-Khair and Abu Shaira study, the study of Muhammad and Geneva (2016), the study of Shahid et al., the study of Shallah (2015), and the study of Josheth (2012). While other studies indicated the degree of availability of teaching competencies such as the study of Al-Shammari and the study of Al-Thaqafi (2019), which aimed to identify professional competencies required for university faculty, the current study, intended to determine the level of professional competencies and their connection to emotional intelligence. Also, most of them were not applied to faculty members, except for the study of Shahid et al. (2015). Also, no study addressed the level of professional competencies and its relationship to the level of emotional intelligence among faculty members in Palestinian universities as well as Al-Quds Open University, which is a strong motive and justification for conducting such the study.

3 The Study Methodology

The researchers followed the descriptive-analytical method to a population that consists of all the faculty members at Al-Quds Open University in Gaza who were 92 university instructors among them (52) are full-timers and the other (40) are part-timers.

3.1 Sample of the Study

The actual study sample tackled all the faculty members, due to the small size of the study population. So, the questionnaires were distributed to all members of the study community i.e. (92). However, only (65) responses were regained, with a percentage of (70.7%) of the study community. The participants of the study are classified according to their contract status, gender, branch of the university, and the college they teach in, and their academic qualification as follows (Tables 1, 2, 3, 4, 5, 6 and 7):

Table 1. Classification of the participants according to status

	Status	Number	Percentage
1	Full-time	38	58.5
2	Part-time	27	41.5
Total		65	100%

Table 2. Classification of the participants according to gender

	Gender	Number	Percentage
1	Male	59	90.8
2	Female	6	9.2
Total		65	100%

Table 3. Classification of the participants according to the university branch

	Branch	Number	Percentage
1	North	16	24.6
2	Gaza	20	30.8
3	Central	17	26.2
4	Khan Younes	4	6.2
5	Rafah	8	12.3
Total		65	100%

Table 4. Classification of the participants according to the college

	College	No	Percentage
1	Educational sciences	13	20.0
2	Technology and applied sciences	16	24.6
3	Social and family development	4	6.2
4	Administrative & Economic Sciences	22	33.8
5	Literature	6	9.2
6	Media	4	6.2
Total		65	100%

3.2 Tool of the Study

The researchers, for the data collection, designed a questionnaire aiming at determining the level of professional competencies and their relationship to emotional intelligence among faculty members at Al-Quds Open University in Gaza. The questionnaire included 3 sections. The first section is personal data i.e. (status, gender, branch, college, academic degree, age, years of experience), and the second section is the professional competencies (48) items, which is made up of teaching competencies (10) items, and technological competencies (11) items, and the human competencies (14) items, and the evaluation competencies (8) items. The third section of the questionnaire is the emotional intelligence domain, which consists of (33) items, which included managing emotions

Table 5. Classification of the participants according to the academic qualification

	Academic degree	Number	Percentage
1	Lecturer	31	47.7
2	Assistant Professor	12	18.5
3	Co-professor	18	27.7
4	Professor	4	6.2
Total		65	100%

Table 6. Classification of the participants according to age

	Age	Number	Percentage
1	30–40 years old	16	24.6
2	40–50 years old	18	27.7
3	50 years and above	31	47.7
Total		65	100%

Table 7. Classification of the participants according to number of years of experience

	Number of years of service	Number	Percentage
1	1–10 years	19	29.2
2	11–20 years	20	30.8
3	21 years and above	26	40.0
Total		65	100%

(8) items, empathy (4) items, self-motivation (8) items, emotional knowledge (6) items, and social communication (7) items.

For the scale of grading, the answers of the participants were adopted based on the scale of (1–5), as (1) indicates the lowest level of approval, and (5) indicates the highest level of acceptance. The acceptance scores were classified and sorted as follows (Table 8):

3.3 The Tool Validity and Stability

The content validity means the validity of referees, so the questionnaire was presented to (10 referees who are experts and specialized in the field. For the Structural validity, it was found that the significance level values are less than (0.05) which that all domains have statistically significant validity coefficients, and they meet the purposes of the study.

Using Cronbach's alpha equation, the stability of the questionnaire was checked by calculating the correlation coefficients using the Cronbach alpha equation to find

Table 8. Approval degree scale

Level of acceptance	Digital weight	The means		Relative weight	
		From	To	From	To
Very low	1	1.00	Less than 1.80	20.00	Less than 36.00
Low	2	1.80	Less than 2.60	36.00	Less than 52.00
Medium	3	2.60	Less than 3.40	52.00	Less than 68.00
High	4	3.40	Less than 4.20	68.00	Less than 84.00
Very high	5	4.20	5.00	84.00	100.00

that Professional competencies are 0.955 and the Emotional intelligence is 0.940. It is clear that the correlation coefficients using Cronbach's alpha equation are close to 1.00, and they are statistically significant coefficients to meet the purposes of the study. The stability of the questionnaire was also verified by calculating the correlation coefficients by the half-split method, as shown in the following Table 9:

Table 9. The half-split correlation coefficients for the **questionnaire** domains

Domains	Correlation coefficient	
	Before modification	After modification
Professional competencies	0.773	0.872
Emotional intelligence	0.806	0.893

Table 9 shows that the correlation coefficients values are close to 1.00, so they are statistically significant stability coefficients. Accordingly, this questionnaire is valid and stable to be used for the purposes of the study.

4 The Results

4.1 Answering the First Question

To answer the first question i.e. What is the level of professional competencies for the university instructor at QOU in Gaza? the means, standard deviation, and relative weight were calculated to find that the level of professional competencies for the university instructor at QOU in Gaza reached a relative weight of (90.497), which is very high.

The analysis of the domains of teaching competencies, technological competencies, human competencies, and evaluation competencies came with relative weight (89.877), (87.580), (93.736), and (89.615), respectively, which is a very high level of competency. The researchers attribute this result to the interest of the administration at Al-Quds Open University in upgrading the skills and competencies of the faculty members through conducting training courses and workshops for all members of the academic staff, as

the top management of the university is seeking for refining the technological skills of faculty members through specialized training courses to keep pace with the requirements of the modern era, and this may be attributed to the fact that all the staff members are well-educated and have human nature in dealing with students as their sons or brothers in most cases since they have a sense of responsibility stemming from their religious beliefs that distinguish the Palestinian society. Finally, this result could be because of the administration of Al-Quds Open University's efforts in unifying the standards of good evaluation among all the academic staff and urging them to transfer the evaluation culture among students, leading to self-evaluation.

4.2 Answering the Second Question

This question i.e. What is the level of emotional intelligence of for the university instructor at QOU in Gaza? was answered using the means, standard deviation, and relative weight. The analysis of the emotional intelligence domain reveals that the level of emotional intelligence for the university instructor at QOU in Gaza hit a relative weight of (88.401) that indicates a very high level.

As for the analysis of the items of this domain, the managing emotions, sympathy, self-motivation, and emotional knowledge, it was found that the level of managing emotions, and social communication for the university instructor at QOU in Gaza came with a relative weight of (87.192), (88.385), (89.269), (87.692), and (89.407) respectively which is very high.

The researchers attribute the high level of emotional intelligence among the faculty members to their possession of sufficient knowledge and skill in how to humanely deal with students under their educational and scientific experiences and their mental, emotional and social maturity.

4.3 Answering the Third Question

To answer this question i.e. Is there a corelation between the level of professional competencies and the level of emotional intelligence for the university instructor at QOU in Gaza? the following hypothesis was composed:

There is no statistically significant relationship at the level ($\alpha \leq 0.05$) between the level of professional competencies and emotional intelligence among the faculty member at Al-Quds Open University in Gaza.

This hypothesis was tested by calculating the Pearson correlation coefficients, as presented below:

Table 10. Pearson's coefficients for professional competencies and emotional intelligence

Domain		Managing emotions	Sympathy	Self-motivation	Emotional knowledge	Social communication	Emotional intelligence
Teaching competencies	coefficient	0.626	0.501	0.642	0.585	0.608	0.674
	Sig	0.000	0.000	0.000	0.000	0.000	0.000
Technological competencies	coefficient	0.617	0.462	0.665	0.627	0.544	0.668
	Sig	0.000	0.000	0.000	0.000	0.000	0.000
Human competencies	coefficient	0.472	0.333	0.562	0.453	0.579	0.542
	Sig	0.000	0.007	0.000	0.000	0.000	0.000
Evaluation competencies	coefficient	0.396	0.477	0.586	0.335	0.498	0.451
	Sig	0.001	0.000	0.000	0.006	0.000	0.000
Professional competencies	coefficient	0.636	0.448	0.734	0.607	0.668	0.704
	Sig	0.000	0.000	0.000	0.000	0.000	0.000

It is shown in the above Table 10 that:

- Pearson's Correlation Coefficients between teaching competencies and emotional intelligence are statistically significant, and this indicates the existence of a positive statistically significant relationship at the level ($\alpha \leq 0.05$) between teaching competencies and emotional intelligence among faculty members at Al-Quds Open University in Gaza.
- Pearson's Correlation Coefficients between technological competencies and emotional intelligence are statistically significant, and this indicates the existence of a positive statistically significant relationship at the level ($\alpha \leq 0.05$) between technological competencies and emotional intelligence among faculty members at Al-Quds Open University in Gaza.
- Pearson's Correlation Coefficients between human competencies and emotional intelligence are statistically significant, and this indicates the existence of a positive statistically significant relationship at the level ($\alpha \leq 0.05$) between human competencies and emotional intelligence among faculty members at Al-Quds Open University in Gaza.
- Pearson's Correlation Coefficients between evaluation competencies and emotional intelligence are statistically significant, and this indicates the existence of a positive statistically significant relationship at the level ($\alpha \leq 0.05$) between evaluation competencies and emotional intelligence among faculty members at Al-Quds Open University in Gaza.
- Pearson's Correlation Coefficients between professional competencies and emotional intelligence are statistically significant, and this indicates the existence of a positive statistically significant relationship at the level ($\alpha \leq 0.05$) between professional competencies and emotional intelligence among faculty members at Al-Quds Open University in Gaza.

The researchers attribute this to the fact that the faculty members possess sufficient knowledge and skill in how to humanely deal with students under their educational and scientific experiences, as the faculty members' experience in teaching and their possession of various professional competencies make the increasing of their emotional intelligence an expected result that has been refined by different situations and experiences.

5 Conclusion

It is concluded that the level of emotional intelligence of a faculty member at Al-Quds Open University in Gaza is very high, and there is a positive statistically significant relationship between the level of teaching competencies and the level of emotional intelligence of the faculty members. It is also concluded that there is a positive statistically significant relationship between the level of technological competencies and the level of emotional intelligence of the faculty members. Additionally, there is a positive statistically significant relationship between the level of human competencies and the level of emotional intelligence. A positive relationship also was revealed between the level of evaluation competencies and the level of emotional intelligence as well as the level of professional competencies and the level of emotional intelligence of the faculty members.

6 Limitations and Recommendations

The application of the study was limited to the faculty members of Al-Quds Open University in the Gaza Strip during the second semester of the academic year 2021–2022.

Based on the results and limitations of the study, the researchers recommend maintaining interest in professional growth by studying needs and keeping pace with global trends, as well as maintaining the development of the emotional side of university faculty members, as both affect and are affected by each other and reflect positively on students.

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Governance, Technology, Optimal use of Resources and Performance



Tax Culture and Compliance with Tax Obligations of Peruvian Rural Microentrepreneurs

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Abstract. Since the most developed countries have a greater tax culture for the same reason that they are more responsible with respect to compliance, it is essential to internalize a tax culture that emphasizes the importance of meeting one's tax obligations in a conscientious manner and contributing to the growth and prosperity of our people. The researchers in this study set out to find out if and how tax culture influences the likelihood that rural Peruvian microentrepreneurs will file their taxes as required. A sample of 214 rural microentrepreneurs was selected using statistical methods, including a non-experimental cross-sectional design and a relational level of analysis. Based on the data, it seems that 37.6% of rural microentrepreneurs are not tax compliant and have a poor tax culture. Finally, it is demonstrated that tax culture significantly correlates with the purpose of rural Peruvian microentrepreneurs to file all necessary tax returns.

Keywords: Tax culture · Intention to pay · Tax obligations · Rural microentrepreneurs

1 Introduction

There are sectors of the population that do not understand the value of taxes and how they can improve their quality of life, so it is necessary to educate them about their position as partners of microentrepreneurs since many of them are not prepared, informed, or perhaps take the role of ignorance not to comply with their obligations, added the low level of tax awareness, values, identity and training that can be known to not fall into sanctions and act in a democratic way [1]. As we well know, taxes are public revenues demanded by a public administration which will play a very important role in the retribution of the same in the form of resources that can be beneficial to the population such as the construction

of parks, squares, schools, libraries and museums [2, 3]. Tax noncompliance is not only a local problem if not also at the national level and perhaps at the international level, being this problem in microentrepreneurs that if they are not under pressure they do not comply with their obligations, for fear of a sanction or fine by the collecting entity [4]. Such is the case of rural Peruvian microentrepreneurs.

The non-coercive parts of fiscal awareness, such as the attitudes and beliefs of the agents, are called “fiscal awareness” in the literature [5], generating a negative attitude towards governments, taking into account that there will always be corruption, although to a small extent within municipalities and tax collecting entities. Tourism and hospitality, as well as energy and water generation, are the three sectors that contribute the most to the economy in the SUNAT study. Mining and hydrocarbons account for 36% of the total, followed by commerce, construction and agribusiness, which account for 27% of the total [6], seeing from this side that the commerce sector is the sector that contributes the least, being participants of the great irresponsibility that affects in the development of their cities. One of the elements that affect tax compliance is one that we do not understand because it is the most complicated, diffuse and beyond what tax administrators generally know; consequently, they do not assume it or supervise it adequately, and this will continue to grow over the years along with irresponsibility and “liveliness”.

Everything seen above, are subject to reality, although they are not carried properly, it should be emphasized that it is important to comply with our obligations as entrepreneurs and generate efficiency in the provision of services by the administering public entities [7]. Seeing the case of the micro-entrepreneurs of the city as the reality is different, Mrs. Clementina Araucano, fruit merchant mentioned that sometimes she did not issue her ballots because the municipalities did not give her an adequate administration of the collection of taxes and did not provide a better service with what was collected, she hinted that there were thefts with the said taxes and that it did not benefit them at all, Mr. Porfirio Mendoza, retributed his non-compliance to that he does not know that by providing these taxes, the security capacity can be improved, Mrs. Irma del Castillo, a chicken trader, mentioned that not everyone complies with their obligations and if they do, it is when there are large sales that it would not be fair that only some pay. On the other hand, Rotney Vargas, a young man who sells sneakers, mentioned that he did issue receipts at the time of sale and that at least the basic taxes must be complied with and that thanks to this, some social aspects in Peru can be improved. Regarding tax values, it was observed that there is a small absence and that sometimes they may even make excuses for not admitting their irresponsibility at the time of paying their taxes. The level of studies is basic, therefore, some of them do not know in depth about the good use that can be made of taxes, although this is not a factor that can justify their actions, but they take it as a pretext to continue evading taxes.

According to the above, one of the best ways to improve this problem that exists would be to strengthen the tax culture by making known the importance of putting into practice the values, beliefs, attitudes they take in relation to the collection of their taxes so that they can not fall into certain crimes by failing to comply with tax rules [5], they should know that this good practice is important so that they can provide public services (security, lighting, cleaning, etc.) of quality and hence be able to generate full confidence when collecting. Thus, the purpose of this research is to analyze the relationship.

The second Tax Theory of Contribution emphasizes principles such as Tax Justice which is established according to the proportionality in the distribution of public enterprises taking into account the tax law, that is why those who have more pay more, Tax Legality which is imposed according to the law, generality where the state imposes the law for the entire population and forces them to contribute to public expenses, legal certainty which is one of the instruments of legal certainty. Our Peru will be a new country with numerous possibilities of progress for our children, brothers and grandchildren, reducing or eliminating tax evasion. The State must be adequately funded as a national shield to protect public order and supervise the collection of services from various angles [8]. In the Peruvian case people's attitudes towards tax collection is tainted by corruption and mismanagement of taxes, since they have a poor contribution in the development of our society, so the attitude resistant to a regulation is alive because these are perceived as inefficient, unfair, and corrupt.

It is coercively enforceable, substantial because it is the duty of the taxpayer to pay taxes, and formal because it will comply with the mechanisms, means, deadlines, forms and conditions of control to ensure the substantial obligation [9]. The state acts as an active subject (collects) and the subject as a passive subject (pay) its tax obligations while the state will have to ensure compliance. Within them we can see the types of tax obligations one of them is the formal obligation which are all those that are imposed on taxpayers [5, 10], and that compliance is basically related is related to the actions, duties, procedures and responsibilities outlined in the Law or in the Municipal Tax Law. It should also be emphasized that this duty refers to the method to be followed to satisfy the considerable obligation to pay taxes. Everyone has the responsibility to contribute to the State budget, but not everyone fulfills their tax duties (declare, register in the RUC, grant invoice, comply with all the requirements of the tax administration, register in the corresponding regime). It should be noted that these legal responsibilities do not imply the actual payment of taxes, but in certain circumstances both are required: declare and pay VAT, income tax, excise tax, etc.

Failure to comply with these responsibilities has penalties [11]. The second type is crucial, as it is a substantial responsibility to pay state taxes, whereby the Constitution specifies that every citizen must contribute to state finances. For example, in the case of income tax, the taxpayer fulfills his substantial responsibility by paying the tax. Consequently, the considerable tax obligation is not fulfilled until the State receives the payment of the tax [12].

The Active Subject is the one who is empowered by law to manage and collect taxes at the level, while the Passive Subject is any individual or legal entity obliged to pay taxes.

The generating facts are sales, consumption, import/export of goods and capital alterations. The taxable event is the State's guideline for the materialization of the generating event. The taxable event is the moment in which the obligation arises or is configured for each of the taxed activities. The taxable base is the factual value or unit of measurement on which the tax rate is imposed. The rate is the percentage of the tax base that is assigned to the tax liability. The tax period is the time in which the taxpayer must declare and pay the tax [6].

We can cite the tax compliance theories of [13], this model shows a logical individual seeking to benefit from income tax evasion risks being audited and sanctioned for the non-compliance already detected. Consequently, his strategy will be to minimize the danger of evasion and maximize the impact of fines [14] (Gómez, 2020). This model has four aspects: demographics, opportunities for noncompliance, attitudes and views, and the tax system. This model considers that demographic factors, such as gender, age and education, have an indirect impact on taxpayer compliance. However, the likelihood of non-compliance is defined by income, source of money, and education, which directly affects the taxpayer's attitude [12, 15].

[16] in his thesis points out the objective of this study is to describe the tax culture and its influence on compliance with the IGV-Renta in food retail micro-entrepreneurs of the Sullana model market. Approximately 300 retail microentrepreneurs in the Sullana model market were interviewed, observed and surveyed. This study concluded that the 2022 Sullana model market grocery micro-entrepreneurs of the Sullana model market are mostly elderly women who only completed basic school, so they do not contribute to the growth of tax culture.

Based on the above, the general objective is to know the link between tax culture and compliance of rural Peruvian microentrepreneurs. And the hypothesis is that tax culture influences the tax compliance of rural Peruvian microentrepreneurs. Like any study, there are limitations such as the fact that the results can be generalized to the Peruvian level but not to the Latin American level since the context where the organization is developed can be very variable at the Latin American level according to the reality that is lived in each region and the responsibility that each citizen has with his respective community.

2 Methodology

The present study used a non-experimental cross-sectional design and a relational level of analysis; each of them was described in detail, establishing the existing relationship; it dealt with issues of tax culture and how they affect the fulfillment of the obligations of rural Peruvian microentrepreneurs, which is developed in their commercial activities.

The population consisted of 214 individual microentrepreneurs, but due to the small size of the population, the same number was considered for the sample. A questionnaire adapted from [17], was administered with 18 questions, of which 9 correspond to tax culture, which has a Cronbach's alpha of 0.742. The other 9 questions correspond to compliance intention, which has a Cronbach's alpha of 0.751.

Also add that for the contracting of hypotheses, the Kolmorov-Smirnov normality test was performed, which yielded a $p < 0.05$, which shows that our variables in mention do not have a normal behavior, then for the same reason we will use as a tool to determine the degree of relationship of our variables, the Spearman's Rho statistic [18]. Finally, it is worth mentioning that participation was voluntary while maintaining the biosafety protocols due to the Covid 19 pandemic and the parameters of professional ethics that correspond to this type of research.

3 Results

It was identified that Peruvian rural microentrepreneurs are on average 38 years old, our sample comprises 214 microentrepreneurs in total of which 66.9% are men and 33.1% are women, since the average income of microentrepreneurs is approximately 1537 soles and a level of technical education in its majority which is made up of 60% and what is even more important, their level of occupation which is independent represented by 70.77% of the total respondents.

The normality test of data through the Kolmogorov Smirnov index with a confidence level of 95%, as it is appreciated that the values found are significant because the behavior of the variables does not have a normal distribution [19] (Table 1).

Table 1. Data normality test.

Variables	Kolmogorov-Smirnov ^a			Result
	Statistician	gl	Sig.	
Tax culture	0.232	130	0.000	No normal
Intention to comply with tax obligations	0.175	130	0.000	No normal

^aLilliefors significance correction.

According to Table 2, 23.8% of rural microentrepreneurs have a low level of tax culture, 15.2% have a medium level and 13.5% have a high level of tax obligations, while 12.3% have a medium level.

Table 2. Tax culture and intention to comply with tax obligations.

Levels of intent to comply	Level of tax culture			Total
	Low	Medium	High	
Low	23.8%	15.2%	1.0%	40.0%
Medium	11.5%	12.3%	9.2%	33.1%
High	1.1%	12.3%	13.5%	26.9%
Total	36.5%	39.8%	24.8%	100.0%

As shown in Table 3, the Spearman correlation coefficient test result of $p = 0.000$ is lower than the theoretical significance value of 0.05, indicating that the null hypothesis is rejected. This indicates that there is a strong correlation between tax culture and tax compliance by rural Peruvian microentrepreneurs.

Table 3. Correlation of tax culture and intention to comply with tax obligations.

Rho de Spearman		Tax culture	Intention to comply with tax obligations
Tax culture	Correlation coefficient	1	,687**
	Sig. (bilateral)		0.000
	N	214	214
Intention to comply with tax obligations	Correlation coefficient	,687**	1
	Sig. (bilateral)	0.000	
	N	214	214

** . The correlation is significant at the 0.01 level. (bilateral)

4 Contributions

Based on this order, it was obtained as a result on the tax culture variable that 40.8% of the microentrepreneurs perceived that the tax culture is at a medium level. These obtained results coincided with [16], in his research, where it is inferred that 90% of the microentrepreneurs qualify it significantly. Well, also in their research [20] points out to us that 91.7% of their respondents consider that the tax culture has a regular medium level, while only 8.33% of respondents consider that the level of tax culture is low, which reflects a similarity in the results. Additionally [21, 22] in his research, mentions that 69% of taxpayers in the district municipality of Chocope, present a low level of tax culture while only 9% of taxpayers present a high level of tax culture, since they are unaware of the main reason why they should pay taxes, which in turn has its origin in the training centers. Similarly [23] in his research, points out that 45.7% of the microentrepreneurs surveyed have never made the declarations before SUNAT and that only 10% of them if they have declared their obligations, even highlighting that 43.05% of them if they have declared, but only a few times, which shows again that the little knowledge that these people have in this regard, so in this same study also points out that 100% of the microentrepreneurs who participated in this survey have responded to the same expressing that they have never received talks by SUNAT.

On the other hand, the variable of compliance with tax obligations was perceived by Peruvian rural microentrepreneurs in a way that resembles that of other studies such as the ones we will see below. As a result, the vast majority (40%) of formal microentrepreneurs show low levels of compliance with tax obligations, while a minority (26.92%) show high levels of compliance with tax obligations, i.e. the vast majority are not complying with their payments and declarations to the state. This result agrees with the research of [16] in his research where the following results were obtained: 93.3% of respondents rated as medium level the compliance with the obligations of natural and legal persons, while 5.4% rated it at a high level, and only 1.3% rated this variable with a low level.

[24] also concluded in their research that most taxpayers have a low level of tax culture, represented by 62.30%; the use of payment vouchers also has a low level of 68.85%, therefore tax evasion has a high level of 65.57%, which indicates that the

tax system is not efficient, nor consolidated, nor has it implemented all the necessary corrective measures so that these actions do not occur.

On the other hand to go to an international scope in the analysis of the general hypothesis [25, 26] in his research shows as a result that Ecuador has more tax revenue from tax collection, above the income from oil exports, which is taken as the basis of fiscal sustainability, to promote tax culture and thus be able to contribute to the development of the country, since there is a significant proportion of collection of interest on arrears and tax fines, which exceeds the collection of the Simplified Tax System, seeing the reality this makes up more than half of the total number of companies in that country. Finally, [9] in their article mentioned that it represents the first source of tax revenue for the Ecuadorian economy due to its broad tax base and ease of collection, where they reached the result that there is a positive relationship between economic growth and tax collection.

5 Conclusion

It was concluded that there is a statistically significant relationship between tax culture and the intention to comply with the tax obligations of microentrepreneurs, which means that as the level of tax culture by the microentrepreneur increases, the intention to comply with their tax obligations with the State increases; that is, as one variable increases, the other variable increases in direct proportion. In this context, it was shown that there are high levels of tax problems, because on the one hand, with respect to tax culture, this is a subject that has been neglected too much, since state authorities and entities related to the subject have not been concerned with raising awareness and providing information on the subject, showing the advantages of compliance with the same, and on the other hand, with respect to compliance, the fact that the first variable was not adequately addressed resulted in the fact that compliance with the obligations was not carried out in the right way and at the right time, so much so that natural and legal persons distrust the system and the treatment that will be given to the money, since the taxes collected are not being used in the best way by the authorities, which has an impact on the fulfillment of the obligations; This means that the variables in question act in a directly proportional manner; Therefore, if the first variable is improved, the second one will also improve, a subject that must be reviewed by the state entities and which must be given due importance and emphasis through training and joint talks by different means in order to reach the largest number of target public, since this public expresses that there are no initiatives of the state institutions in informing about these normative and formal processes that benefit both parties, since that budget that enters the coffers of the state are the main support of the activities of this organizational structure that serve to support the growth and development, emphasizing also that it is of imperative degree within the economic cycle of the country.

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Determinants of Foreign Direct Investments in Bangalore

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Abstract. This study is conducted in the city of Bengaluru, India to study the factors that make MNCs invest and operate in the city. Data is collected from 20 Multinational corporations to know about the factors that attracted them here. Primary factors affecting FDI are Economic Factors, Physical Infrastructure, Taxation and Inflation, Affordable Labour Cost, Geographic location and Climatic Conditions, Fiscal Incentives, Social Conditions, Political Environment, Government policies and initiatives, Availability of Technical Expertise, Market size and growth rate, prospects, High investment returns etc. Top 5 factors which impacted the entry of MNCs into Bengaluru are low labour cost (49%), Technical expertise (44.5%), climatic conditions (43.5), and availability of elite educational institutions (41%) (which make educated workforce available) and Government policies and initiatives (40%). Apart from these advantages in their favour, these organisations face challenges in the shape of traffic congestion, bad road infrastructure due to the slow-paced ongoing infrastructural projects, waterlogging etc. t-test is used to assess the responses. It has been observed that there is a significant difference faced by the firms in the challenges faced by them during the introductory stage and while considering reinvestments. This also opens avenues for further explorations in the area to avoid inconvenience to these investors.

Keywords: Foreign investment · Bengaluru · GDP · Multinational corporations

1 Introduction

Many Multinational companies or corporations chose Bengaluru to be their destination. These companies also called Transnational corporations to register and operate in more than one country at a time. Generally, they have headquarters in one country and operate through subsidiaries in other countries, (Britannica 2022). Bengaluru has the highest number of Multinational corporations and research and development centres. India can provide engineers to these MNCs. 456 MNCs operating in India, (John 2016). Texas Instruments Inc. Was the first company to begin its operations in Bengaluru in 1985, (<https://thescalers.com/>). Bangalore has served as India's technology capital for over three decades. The city has significantly contributed to India's IT Leadership in the

world, (Prakash 2020). The number of MNCs is continuously on the rise in India. In 1991, there were 197 MNCs in India which grew to 891 in 2012. The contribution of these MNCs in India in the year 2011–12 was 5.24 to the GDP and accounted for 16.51 for FDI, (Kaur 2017). Bengaluru is the capital city of the state of Karnataka and was founded by Kempe Gowda I. Govt. of Karnataka renamed Bangalore to Bengaluru in 2006. Union ministry approved this name change in the year 2014. Bengaluru is well known as the Silicon Valley of India due to the presence of companies dealing with information technology, (Wikipedia 2022). Bengaluru's economy contributes 4365 to the economy of the state. It accounts for 98% of the total exports of the state. As of 2020, Bengaluru's IT firms employ around 1.5 million employees in IT and IT-enabled services. Metro's GDP of the city is around US\$ 110 billion. The Gdp Per capita of Bengaluru is roughly US\$ 8,461. It has been ranked as the fourth most productive metro area in India, (Wikipedia, Economy of Bangalore 2022).

2 Literature Review

Bangalore is an iconic place due to the presence of universities and research facilities to train skilled workers to develop new technology and people's entrepreneurial drive to start new ventures, (Krishnaswamy, Four Factors that made Bangalore an icon 2001). Factors such as incentives by state and central govt, the strategic location of the city in the Indian Peninsula and a network of roads and railways contributes to the growth of Bengaluru, (Factors that influenced the development of the electronic city of Bengaluru). Liberal policies introduced during the early 1990s stimulated the growth of FDI in Bengaluru. Its growth is also attributed to its environmental and geographic location advantages, (Arun Natrajan Hariharan 2021). Key factors contributing to the attractiveness of India as an investment destination include, the availability of raw materials, policy reforms and cheap labour, corporate tax cuts, ease of doing business measures, simplification of labour laws, FDI reforms and focus on human capital are some of the recent reforms in the country for fresh investments. Also, India's plan to invest Rs, 113 lakh crore in infrastructural development in 100 smart cities has been attracting MNCs to the Nation, (Singh 2020). New computer and software policies announced in 1984 resulted in the liberalization of the import and export of hardware and software in India. Organisations like Wipro and Infosys set up camps in Bangalore as a result and hire Indian programmers. American companies were attracted by offering them advanced systems offered in India. Americans started utilizing a huge talent pool along with low operational costs. As a result, they started setting up software facilities and innovation centres on Indian soil. The value of R&D done in India is estimated to be around \$40 billion. The primary factor contributing to this is tech-talents availability. Nearly one million residents are developers in the city of Bengaluru. They can build custom software at a low cost. The availability of Technical expertise and a multi-skilled labour force is an important determinant of a heavy concentration of R&D centres in Bangalore. Amazon, Tesco, Nokia, Siemens, Microsoft and IBM are a few to name, (Scalers 2020).

The city has an attractive location for setting up IT firms followed by good telecommunications and data communication infrastructure. The infrastructural setup in these regards is better in Bangalore than in any other city in the nation. Different cities specialise in one or more functions, such specializations develop when produced goods and

services are consumed by both inhabitants and external actors. These specializations, known as urban functions help urban development better, (Srinivas 1998). The make in India campaign by the Indian Government is another factor responsible to attract FDI. The process of FDI is related to acquiring assets in the host nation to carry out production distribution and other related activities, (Sharma 2017). Karnataka recorded 48% and 41% of FDI in India during the first two quarters of 2021–2022. During the third quarter of 2021, 1.02 lakh crore of FDI was received by Karnataka. The total FDI received by India during this period was 2.29 Lakh crore and nearly 45% of this was received by Karnataka, mostly Bangalore, (SOOD 2022).

Determinants of FDI are largely classified into two factors viz economic conditions and host countries policies. Other factors determining the flow of FDI are Market size, rate of urbanization and industrialization, labour cost, physical and economic infrastructure and underlying economic factors such as inflation, tax regime, external debt etc. Relative strength of a currency is attractive for investments as assets are relatively cheaper. Social, political and economic reforms enhance investors’ confidence by improving a favourable business environment, (Narayan 2014).

Fiscal incentives, low tariffs, and BITs (Bilateral Investment Treaties) with developed countries have an impact on FDIs, (HOODA 2011).

3 Objectives

- To find Bengaluru as preference of MNCs for investment
- To find top factors contributing FDI in the city
- To assess the challenges faced by organisations being in the city

4 Methodology

Primary data is collected from 20 MNCs in Bengaluru city. The questionnaire included two sections to know about the preference of the companies to initially invest in the city and to know about the factors which push these organisations to reinvest. Respondents were asked to rate each factor in order of preference in each section (Table 1).

Table 1. Responses rating factors affecting FDI

Determinants of FDI-importance %age	Responses Part A					Mean	Responses Part A					Mean
	20%	40%	60%	80%	100%		20%	40%	60%	80%	100%	
Economic Factors	1	4	6	4	5	34	1	3	3	6	7	37.5
Physical Infrastructure	–	2	5	11	2	36.5	1	1	4	12	3	39
Taxation and Inflation	3	5	5	3	2	25	2	4	4	4	2	23.5

(continued)

Table 1. (continued)

Determinants of FDI-importance %age	Responses Part A					Mean	Responses Part A					Mean
	20%	40%	60%	80%	100%		20%	40%	60%	80%	100%	
Affordable Labour Cost	–	–	–	2	18	49	–	–	–	3	17	48.5
Geographic location and	1	2	2	8	7	39	–	1	3	7	9	42.5
Climatic Conditions	–	2	2	3	13	43.5	–	1	2	5	12	44
Fiscal Incentives	4	4	5	3	4	29.5	3	5	4	4	4	30.5
Social Conditions	1	3	6	6	2	29.5	–	3	6	6	5	37
Political Environment	2	3	4	5	6	35	1	4	4	5	6	35.5
Government policies and initiatives	0	1	4	9	6	40	–	1	4	7	8	41
Availability of Technical Expertise	–	–	3	5	12	44.5	–	–	–	2	18	51
Market size and growth rate	1	2	3	8	6	38	–	–	2	3	15	46.5
Prospects	2	3	6	5	4	33	1	1	2	5	11	42
High investment returns	–	3	5	5	7	38	–	1	4	3	12	43
Exchange rate	3	3	4	6	4	32.5	2	3	3	8	4	34
Exports	3	5	5	5	2	24.5	2	5	5	4	4	31.5
SEZs	3	4	5	5	4	33	2	2	3	7	6	36
Educational institutions	–	1	1	3	15	41	–	–	1	1	18	48.5

The top 5 factors which impacted the entry of MNCs into Bengaluru are low labour cost (49%), Technical expertise (44.5%), climatic conditions (43.5), and availability of elite educational institutions (41%) (which make educated workforce available) and Government policies and initiatives (40%). Factors that impact re-investment/ expansions are the availability of Technical expertise (51%), followed by affordable labour cost and availability of premium educational institutions (both 48.5%), market size and growth rate (46.5%) and high returns on investments (43%) (Table 2).

Table 2. Challenges faced by MNCs in Bengaluru

	Responses- Part A		Responses- Part B		P value
	Yes	No	Yes	No	
Political factors	–	20	1	19	0.20893

(continued)

Table 2. (continued)

	Responses- Part A		Responses- Part B		P value
Banking facilities	3	17	2	18	
Legal framework	5	15	4	15	
Infrastructural challenges- roads	3	17	18	2	
Transport	3	17	2	18	
Waterlogging	–	20	17	3	
Satisfaction related to foreign trade policy	18	2	18	2	

5 Challenges Faced

The p-value of challenges faced by firms during initial investments and subsequent investments is 0.20893. This suggests that there is a significant difference between the challenges faced by the firms. During the recent downpour in September 2022, waterlogging affected many areas of Bangalore. Many companies were shut down due to either water entering their premises or due to the non-approachability of their campus due to rain-waterlogged roads. Many residential areas were also submerged underwater, bringing to light the poor state of infrastructure at present in the city. Metro city is also facing challenges due to traffic congestion on the roads. Concentrated construction of office space along the outer ring road and other areas inside the city has made traffic situations worse. Commute time on the roads of the city is very high during peak hours. Ongoing infrastructural projects (flyovers, Metro rail work etc.) are the major causes of building up traffic.

6 Conclusion

Bengaluru has been the favourite destination for MNCs to invest in. Many factors ranging from the availability of technical workforce to favourable climatic conditions contributed towards this step. Bengaluru presently is home to many multinational corporations and various research and development centres, the number being the highest in the country. Going by the trend it would continue to be so in the recent times to come. This can be supported by the availability of various technical institutions present in the city to support the supply for present and new entrants in the area. Apart from many favourable conditions enjoyed by MNCs in Bengaluru, they are not secluded from the heat of heavy traffic congestion and waterlogging (as surfaced during the September 22 showers of rain).

7 Limitations and Suggestions for Future Studies

This research is limited to those entrants who are already present in the city. There is much more potential in the city. The study can be extended to many more companies that are likely to come to Bengaluru. Areas around the city can be developed as satellite towns to contain the growth.

The research throws light on the favourable conditions for FDI by MNCs and also brings to light some of the challenges faced by these organisations. Huge MNCs like Google's recent entry into Bengaluru is an indicator of preference for such companies to silicon valley of India. This discussion leads to exploring options for more new entrants. Further research in this regard among various companies across the globe can open gates for many more such companies. A lookout for more such factors that influence investments can be done by exploring those who have not yet been part of the expansion of the city. A peek into such factors can open bigger opportunities for the city in terms of higher revenues from such new entrants.

At the same time, a sneak peeks at correcting unfavourable conditions thereby correcting them can be an added advantage. There is a need to assess the present growth rate and future expansion possibilities to explore the rate at which infrastructure can be developed to contain this possible growth. However, investors who are likely to invest in the future look forward to trade policy reforms export-import improvements along with a few more factors, (Annapurna Singh 2020).

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Financial Reportings and Analysis Practices in Tata Steel and Corus Acquisition: Their Association with Growth Rate and Financial Performance

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Abstract. This research article examined the financial reporting and analysis practices in Tata steel and Corus acquisition: Their association with growth rate and financial performance. This article analyzes the reasons and the effect of the Acquisition of Corus by paying 12.33 billion dollars to buy which is one of the biggest acquisitions by an Indian Company at the cross border. This paper also emphasizes this acquisition led to global growth in Steel Industry. The sample size of this research consists of Tata Steel and Corus Company which underwent acquisitions during 2007–08. This paper also emphasizes the significance of developing skills in analyzing and interpreting financial statements to maintain financial position and progress. To understand the distinguishing characteristics, problems and needs of the organization's growth performance, the published audited report from 2002–2022 was studied and interpreted. To measure the significance of the organization's performance the author adopted comparative, ratio analysis and other statistical tools were adopted. The study shows that there is important growth in income and financial position of companies after the merger, the growth can result in financial stresses and excessive use of debts as such cash flow difficulties. But the coronavirus (Lockdown) the company faced a downfall in their profits.

Keywords: Tata steel and corus · Mergers and acquisitions · Growth rate and financial performance · Share holders' funds

1 Introduction

The ideas that underlie financial reports have developed over several hundred years. This development continues today to meet the needs of a changing society. Demand for financial reports exists because users believe that the reports help them in decision-making. In addition to the financial reports, users often consult competing information sources, such as new wage contracts and economy-oriented releases. In the present covid-19 (pandemic) situation where all companies are suffering in their sustainability, finding it difficult in making payments (interest, Debts), Manufacturing expenses and modern

technology (M&As) and also adopting reporting standards is the only means to, adopt the modern method, Increase the trade, enter fresh ventures or to create collaborations with prevailing business functions and overcome the present market risk (includes financial risk. In the present scenario every organization believes that M&As as Mergers and Acquisitions will take the businesses to a safe and profitable and global standard. The Financial reporting and analysis practices in Tata Steel and Corus acquisition: Their association with growth rate and financial performance. **The** present study measure by adopting Financial reporting and, the M&A helps in increasing the profit earning capacity and repay the debts in time and the impact on the growth of the organization's pre and post-acquisition and to know the effect of the implantation of financial reporting into the system.

1.1 Review of Literature

Ramakanta Prusty, 2011, Vol. 1, Issue 3, p. 63. P. College of Business Administration Priyanka Gohil, Neesa Institute of Management Studies, Atul Bansal, J.V. Jain College, Sahareanpur; Dr. Atul Bansal. In the paper, an attempt has been made to see how TATA has been affected by its acquisition of Corus group. For this purpose, the authors have analyzed the pre and post-acquisition performance of TATA with the help of the various financial ratios of the company. The paper concludes that TATA is apparently in benefit of its buying Corus and still to benefit in the long run from capital and technology. *International Journal of Financial Management*,

Rajesh Khurana¹ and Dr. D.P. Warne², (2014), made a study on five sectors of Tata Ltd and the paper was focused impact of M&A on maximization of shareholders fund and profitability of Transferor company. The author also made a comparative study on M&A on different countries across the globe. pp. 33–50 Volume 1, Number 1 © *International Research Publication House*.

The successive published papers show that the authors concentrated more on financial performance of the company (Transferor company during pandemic. HBR (2001). Rao and Sankar (1997) in their analysis found that there is great impact on the profitability and liquidity on account of M&A and Hitt, Harrison and Best (1998). Rau and Verma (1997) interpreted that the has investigated that the selling firm always will have a poor performance in the market and make very poor decisions. In general M&A however, higher profitability of the firm being found to be existing pre and post-merger and acquisition Acharya (2000). Clear and factual communication among the Employees of the acquiring and acquired firms is very crucial to increase their productivity which will Resultantly have positive impact on performance of firms during or even after merger and acquisition Appelbaum et al (2000). *International Journal of Entrepreneurship and Small Business Management*.

1.2 Research Gap

Several studies have been conducted on M&A, all the studies had intensive on the adverse sides of the M&A, (stakeholder risk and financial stability risk ect, no studies have been conducted optimistically. Hence the present study on the topic of “Financial Reporting and Analysis Practices in Tata steel and Corus acquisition”: Their association

with growth rate and financial performance, attempted to understand the significance of M&A in the present market condition is the uniqueness of this study.

1.3 Methodology

The current research is an attempt to Analyse Financial Reporting And Analysis Practices In Tata Steel And Corus Acquisition: Their Association With Growth Rate And Financial Performance on the optimistic side of the company. For this purpose, the researcher has collected Annual reports of both the companies dated from 2002–2022 till date to study the impact of coronavirus outbreaks on the financial performance of the company both in the pre and post-acquisition period by implementing the Financial reporting standard for the 2015 onwards(Consolidated Balance sheet). The researchers used the Comparative statement tool, and ratio analysis to find out the growth rate.

1.4 Objectives of the Study

To Study the impact of coronavirus outbreak (Covid-19) on the company's performance.

To understand the significance of implementation of Reporting standard during Acquisition of Companies.

To Analyze Financial performance of post and prior acquisition of the companies.

2 Analysis and Interpretation

Table 1. Analysis of fixed assets

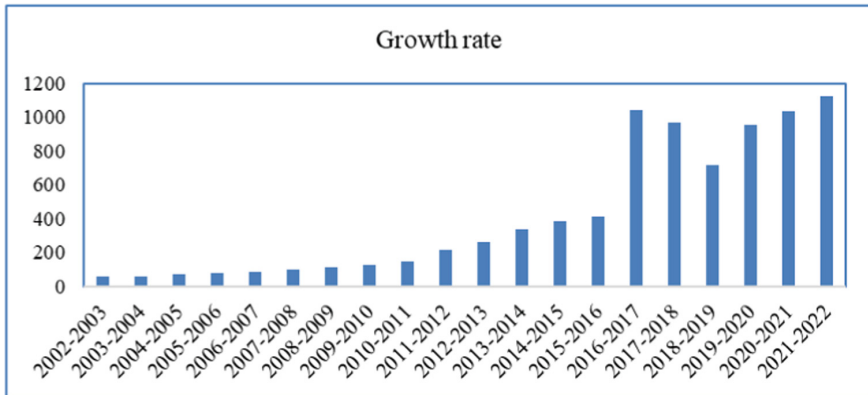
Sl.no	Year	Amount (Rs.)	Growth rate (%)
01	2002–2003	7,543.80	59.75
02	2003–2004	7,857.85	62.24
03	2004–2005	9,112.25	72.18
04	2005–2006	9,865.05	78.14
05	2006–2007	11,040.60	87.45
06	2007–2008	12,624.60	100
07	2008–2009	14,483	114.72
08	2009–2010	16,007.02	126.79
09	2010–2011	18,775.50	148.72
10	2011–2012	27,424	217.24
11	2012–2013	33,597	266.14

(continued)

Table 1. (continued)

Sl.no	Year	Amount (Rs.)	Growth rate (%)
12	2013–2014	42,775.20	338.85
13	2014–2015	,48,285.20	382.50
14	2015–2016	52,411.00	415.18
15	2016–2017	1,31,719.50	1043.44
16	2017–2018	1,22,411.18	969.70
17	2018–2019	90,470.43	716.67
18	2019–2020	120,462.78	954.26
19	2020–2021	1,30,383.37	1032.85
20	2021–2022	1,41,279.69	1119.17

Source: Annual Report of Tata Steel

**Fig. 1.** Graphical presentation of fixed assets growth rate

The above Table 1 and Fig. 1 shows very clearly the increase in the value of Fixed assets after depreciation From 59.75% during 2002–2003 pre acquisition period to 415.8% increase in the value of fixed assets this shows a great positive sign on the M&A. it absorbed that the The company invested more funds on fixed assets afer merger. It indicates that the company more keen on allocating the huge fund on fixed assets.

3 Analysis of Net Current Assets (Working Capital)

Table 2 The below mentioned table indicates the control on the net current assets of the Acquirer from the date of acquisition ie, from 2007–2008 assumed as base year 100% and made comparative analysis from Pre incorporation to post Incorporation 2002–2022 it shows gradual and steady increase in the net current assets (working capital), The analysis also indicates that 2011–2016 there was decline in the value of current assets (Net decrease in working capital (Table 3).

Table 2. Analysis of net current assets (working capital)

S. no	Year	Amount	Growth
1	2002–2003	957.52	3.171262
2	2003–2004	3808.82	12.61463
3	2004–2005	3699.99	12.2542
4	2005–2006	428.88	1.420431
5	2006–2007	8248.23	27.31775
6	2007–2008	30,193.66	100
7	2008–2009	1,311.04	4.342104
8	2009–2010	3,247.08	10.75418
9	2010–2011	13,216.49	43.7724
10	2011–2012	– 4,039.64	– 13.3791
11	2012–2013	– 4,983.80	– 16.5061
12	2013–2014	– 7,317.18	– 24.2342
13	2014–2015	– 4774.62	– 25419.04
14	2015–2016	– 4585,04	– 25608,62
15	2016–2017	14,421.49	47.76
16	2017–2018	20,110.40	66.60
17	2018–2019	36,643.91	114.73
18	2019–2020	17,035.58	56.42
19	2020–2021	1,50,392.56	498.09
20	2021–2022	1,65,035.99	546.59

Source: Annual Report of Tata Steel

In any and every Organization Share capital plays very significant role in the development of the company this companies are also not exceptional the contribution on shareholders form 2002–2022 from the above table there was an upward trend from pre incorporation to post incorporation by comparing the base year 2007–2008 (Fig. 2 and Table 4).

Table 3. Analysis of share holders' funds

S. no	Year	Amount	Growth
1	2002–03	3186.02	11.67
2	2003–04	4515.86	16.54
3	2004–05	7059.92	25.85
4	2005–06	9755.30	35.73
5	2006–07	14096.15	51.63
6	2007–08	27,300.73	100
7	2008–09	30,176.26	110.53
8	2009–10	36,961.80	135.38
9	2010–11	46,944.63	171.95
10	2011–12	52,621.36	192.74
11	2012–13	55,209.68	202.22
12	2013–14	61,147.99	223.97
13	2014–15	66,663.89	244.18
14	2015–16	70,476.72	258.14
15	2016–17	39,421.02	144.395
16	2017–18	49,659.00	181.89
17	2018–19	61,514.82	225.32
18	2019–20	70,454.71	258.06
19	2020–21	76,838.12	281.45
20	2021–22	91,267.11	334.30

Source: Annual Report of Tata Steel

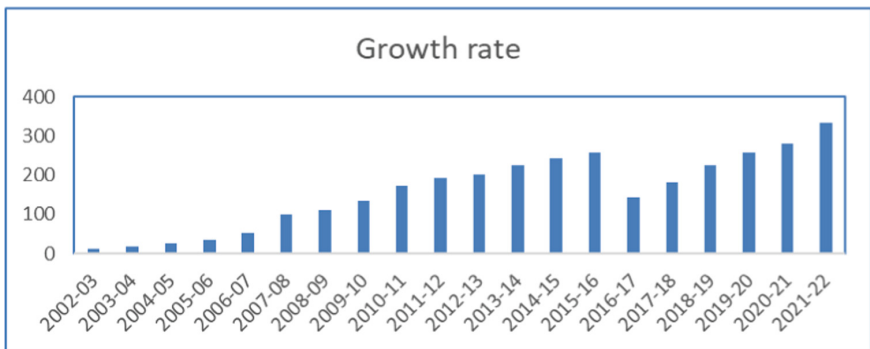
**Fig. 2.** Graphical presentation of shareholders funds

Table 4. Analyses of loans and advances

S. no	Year	Amount	Growth
1	2002–2003	4225.61	30.84
2	2003–2004	3373.28	24.62
3	2004–2005	2739.70	20.00
4	2005–2006	2516.15	18.36
5	2006–2007	9645.33	70.39
6	2007–2008	13,701.89	100
7	2008–2009	15,459.81	112.83
8	2009–2010	12,246.69	89.38
9	2010–2011	24,212.30	176.71
10	2011–2012	10,453.41	76.29
11	2012–2013	7,097.65	51.80
12	2013–2014	8,781.73	64.09
13	2014–2015	3,207.90	23.41
14	2015–2016	4,230.38	30.87
15	2016–2017	3787.88	27.64
16	2017–2018	2119.97	15.47
17	2018–2019	2139.50	15.61
18	2019–2020	2318.16	16.92
19	2020–2021	1607.32	11.73
20	2021–2022	1555.95	11.36

Source: Annual Report of Tata Steel

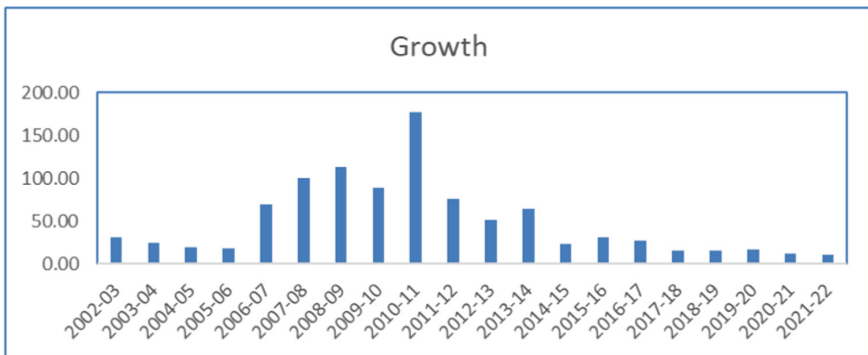


Fig. 3. Graphical presentation of loans and advances

The above Fig. 3 reveals that 2002–2003 onwards there is uptrend by taking the base year 2007–2008. In 2002–2003 the loans and advances amounted Rs. 4,225.61 ie,23.44% as compared 2007–2008 was Rs. 18,021.69. Gradually after acquisition the Loans and advances are gradually declining which clearly analyzed from the above table (Table 5).

Table 5. Analysis of profitability

Sl. no	Financial year	Amount (Rs.)	Growth rate (%)
01	2002–2003	1,012.30	21.59
02	2003–2004	1,746.20	37.25
03	2004–2005	3,474.16	74.12
04	2005–2006	3,506.40	74.90
05	2006–2007	4,222.15	90.08
06	2007–2008	4,687.03	100
07	2008–2009	5,201.75	110.98
08	2009–2010	5,046.80	107.67
09	2010–2011	6,865.69	146.48
10	2011–2012	6,696.42	142.90
11	2012–2013	5,062.97	108.02
12	2013–2014	6,412.19	136.80
13	2014–2015	6,439.12	137.38
14	2015–2016	4,900.94	104.56
15	2016–2017	4,840.25	102.48
16	2017–2018	(4,168.57)	
17	2018–2019	17,762.81	
18	2019–2020		
19	2020–2021		

Source: Annual Report of Tata Steel

The net Profit of the company during pre- incorporation period was significant from 2002–2003 it was increased from Rs. 1,012.30, 21.59% to Rs. 4,222.15,90.08% during 2007–2008. The above study indicates that there was gradual growth during post incorporation but gradually the profit decreased (Fig. 4).

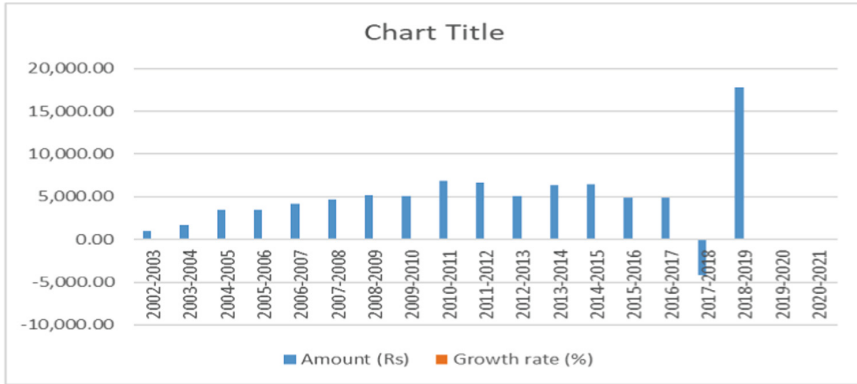


Fig. 4. Graphical presentation of profitability

4 Findings

- From the base year 2007–2008 the company Invested more on the Fixed assets but the profitability of the concern was not par with investment on long term assets, the company could have controlled on fixed assets.
- The current assets (working capital was stable and good till 2014–2015. But 2015–2016 it shows negative percentage of working capital.
- The Profit earning capacity of the company was increasing during pre and post merger which is positive sign of any company, but compared to 2014–2015-2015–2016 the profit after tax declined due to availability low quality steel import.
- The Loans and advances were controlled. The study shows that during pre-incorporation there was increase in loans and advances gradually it declined owing to repayment of loans in the year 2015–2016.
- It is advisable to the company to take precautionary measures to overcome the financial hardness.

5 Conclusion

The study was conducted with objective of measuring the overall performance of the company on account of merger and acquisition and the impact of pandemic on financial performance by implementing financial reporting and analysis practices of the company taking base year 2007–2008 made an comparative analysis with companies investment on fixed assets, Current assets (working Capital). The study shows that company consecrated more on investing on fixed assets rather than Sales and its revenue. Shareholders fund also increased which leads more expectation on returns to the shareholders, the study also reveals that the pandemic impacted lockdown of the company due to which production was declined. From financial 2015–2016 onward the company started implementing financial Reporting to control and safeguard, protect and promote the interest of stakeholders. To conclude the merger and acquisition of both the companies was not without controversy.

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Stock Market vs Commodity Market- A Study on Traders'/Investors' Preferences

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Abstract. The stock and commodity markets have always been the backbone of every nation. More the volume traded in these markets, more will be the rate of capitalization. It then has become extended that there should be strong and consistent players in these markets who uphold and enhance the values of the markets. The players being both the traders and the investors, it becomes very important to understand the nature of interests shown by them either in both the markets or either of the markets.

The current study has deciphered the awareness level of the chosen 100 respondents in Bengaluru city in the state of Karnataka in India, concerning the stock market and the commodity market and the returns they anticipate receiving along with the actual returns that they have enjoyed. Statistical analysis has been done on the data collected from the respondents to analyse their demographic factors with their trading activities in either the stock market or the commodity market or both, as the case may be.

Keywords: Stock market · Commodity market · Investors · Perception

1 Introduction

Regardless of their age, profession, level of education, or level of income, people from all walks of life invest in a variety of assets. When a person has more money than he needs for current consumption, he likes to invest it in either tangible assets like gold or real estate in financial assets like securities, fixed deposits and insurance. Due to the complexity of financial assets, people typically prefer to invest in physical assets rather than financial assets. Every single financial asset and investment plans have their own advantages and disadvantages. The investors also have their own individual choices for various financial/investment plans. Thus investors choose investments, according to their perception and attitude. The commodity markets in the recent era is considered as a very important source of investment. The current research aims to study the investor preferences in the Indian commodity market since investment goals and motivations have an impact on an investor's investment behavior.

2 Stock Exchange

Securities and derivatives are traded on a stock exchange. Essentially, stock market is a place where companies trade their stock at an agreed price. Stock markets are public and private markets for the trading of stocks of companies.

2.1 Significance of Stock Market

The stock market is unique and it is considered as the important source for the corporations to raise capital. This permits business entities to trade publicly or raise additional funds for their business development by trading stocks of ownership of the corporation in a public financial market. The liquidity that a stock exchange offers manages to pay for shareholders the capability to speedily and effortlessly trade securities. This makes stock investment more attractive. Price of shares also influence the wealth of households and their consumption. The exchange also acts as the clearing house for every transaction, denoting that it can accumulate and deliver the shares and guarantee payment to the security seller. This removes the risk of an individual buyer or seller of a security. The smooth operational effectiveness of the activities facilitates economic progression.

3 Commodity Exchange

A commodity market refers to the place where raw materials or prime products are exchanged. These raw commodities are traded on regulated commodity exchanges in which they are purchased and sold in standardized contracts. Commodity markets offer as much an opportunity to investors as the stock market does.

3.1 Commodities Traded

Commodity market exists almost all over the world. The following are the broad classification of commodities traded:

- a. *Precious metals*: gold, silver, platinum, etc.,
- b. *Other metals*: nickel, aluminum, copper, etc.,
- c. *Agro-based commodities*: wheat, corn, cotton, oils, oilseeds, etc.,
- d. *Soft commodities*: coffee, cocoa, sugar, etc.,
- e. *Live-stock*: live cattle, pork bellies, etc.,
- f. *Energy*: crude oil, natural gas, gasoline, etc.

4 Statement of the Problem

The development of stock and commodity markets during the recent times have paved way for the focus on the attitude of investors in commodity and stock markets. In a short duration of time the online stock and commodity markets have witnessed a tremendous growth in India. Are the market players aware of the risk involved in speculation? Does the public understand the organization of the stock markets? To what extent are the traders satisfied with the operational strategies and returns of the market? Are few of the questions which have induced the current topic for an analysis.

5 Review of Literature

Senthil (2017) the paper titled “Investor’s perception regarding the performance of Indian mutual funds” have investigated the investors’ interest and behaviour towards commodity future market in terms of goal line, preferences, reasons inducing while choosing the patterns of investment. The findings of the research study have concluded that the investors’ foremost objective is maximization of their net worth. The study has suggested that the mutual fund corporations should regulate the charges to be paid by the retail depositors and reduce the expenses to a reasonable level.

Kumar (2018) in the paper titled “A study of customers’ preference towards investment in equity share and mutual funds” made an attempt to study the objective of investment of investors and their preference towards various investment alternatives with the help of statistical tools such as z test, chi-square, percentage analysis and ranking method. Author concluded that investors consider mutual funds and equity share as good investment alternative as they prefer liquidity and return as an important criteria for investment consideration.

Sivarethinamohan and Aranganathar (2019) in the paper titled “A Study on investors’ preference in Indian commodities market” studied investors’ preference in numerous investment opportunities of commodity market instruments and also to identify the relationship between the numerous factors persuading the investors’ judgements on commodity market. The study observed significant relationship between the respondents’ age and the dependent factors like terms, conditions and benefits. Significant association between respondents’ profession and features such as awareness and knowledge, tax exemptions and reasonable brokerages is also observed. Author has concluded that the respondents have considered various factors to take their investment choices in commodity market investments due to the presence of both risk and return factors.

Ilyas (2020) in the paper titled “Indian investors behavior and perception: A study of commodity market” focused on discovering the elements inducing the investment pattern of the investors towards commodity markets in India. Results of factor analysis and descriptive statistics concluded the presence of several factors that have larger impact on the behavior of investors of commodity market of India. Information irregularity, objective facts, low risk and high return are some of the main factors that have effect on the investors’ pattern of investment in commodity market.

6 Objectives of the Study

To access the level of awareness of the respondents with respect to the stock and commodity exchanges.

To deduce the consolidated opinion of the respondents in stock and commodity exchange with respect to their choice of market.

7 Research Methodology

The necessary data and information required to achieve the objective of the study have been collected with the help of a well-structured questionnaire. Secondary data

was collected from key books of concerned title, relevant journals and from internet sources. Convenient random sampling has been used to study the preferences of the traders/investors of the stock market and commodity market, 100 respondents were randomly identified from Bengaluru city in the state of Karnataka in India. The period of study is for 6 months between January 2022 and June 2022.

7.1 Hypothesis Used

Personal factors like age, gender, education, occupation and monthly income of the investors/traders have no significant influence on the motivation to invest in stock/commodity markets.

8 Analysis

Table 1 has shown the chi-square analysis done for two factors – the personal factors and the motivation of the select respondents to invest in the stock market.

Hypothesis

The personal factors of the respondents have no significant influence on the motivation to invest in stock market.

Table 1. Personal factors versus motivation to invest in stock market

Personal Factors	Chi-square value	P value	Sig./Not Sig.
Gender	3.684	0.719	NS
Age	21.104	0.274	NS
Educational Qualification	28.436	0.242	NS
Occupation	28.520	0.239	NS
Number of family members	10.495	0.573	NS
Monthly income	16.481	0.559	NS

S- Significant, NS – Not Significant

Source: Computed

Table 2 has shown the chi-square analysis between the personal factors and the motivation to invest in commodity market.

Hypothesis

The personal factors of the respondents have no significant influence on the motivation to invest in commodity market.

Table 2. Personal factors versus motivation to invest in commodity market

Personal Factors	Chi-square value	P value	Sig./Not Sig.
Gender	1.116	0.981	NS
Age	32.196	0.021	NS
Educational Qualification	32.162	0.123	S
Occupation	26.167	0.345	NS
Number of family members	20.297	0.062	NS
Monthly income	22.723	0.201	NS

S- Significant, NS – Not Significant

Source: Computed

9 Findings

- a. Out of the 100 respondents chosen for the study, 79% have been male, 80% of them have been between the age group of 20–40 years representing the young population of India.
- b. Out of 100 respondents chosen for the study more than 80% have been educated establishing their greater presence in the market. Three – fourth of the respondents engaged in business, professionals and private sector employees had been indulging in trading activities.
- c. Respondents with the income level below Rs.40,000 have earned in the markets more than higher income groups. Awareness level of the respondents have been more in the stock market as compared to the commodity market.
- d. Out of the total respondents, three-fourth of the investors have preferred to invest in equity in case of stock market and the preference has been in bullion and metal in commodity market.
- e. 58% of the respondents have been trading through Depository Participants (ICICI Bank) whereas others have been unaware about their depository participant as they have traded through financial consultants such as Karvy, India Bulls, Share Wealth etc.
- f. More than three-fourth of the respondents have not shown any interests in trading through on-line sites. They have preferred more of conventional trading through brokers.
- g. Out of the total respondents chosen for the study majority 88% of them have been satisfied in investing in the exchanges, showing their greater risk taking ability and knowledge about the markets.
- h. 42.42% of the respondents have employed their funds in Reliance Groups and 14.26% of the respondents have opted to invest in bullion markets.
- i. Personal factors of the respondents have no significant influence on the motivational factor to trading in the markets.

10 Conclusion

From the study of traders/investors preferences between the stock and commodity markets a detailed note of the markets in respect of awareness, orientation and action in decision making and satisfaction level of the respondents has been assessed.


The study has provided the following suggestions, periodical investors meet should be organised to educate them regarding trading practices. Since most of the respondents came to know about the stock and commodity markets through brokers, more of awareness should be created among them about the markets. Effective advertisement must be used to bring awareness among people about the stock and commodity markets. The regulatory machinery viz. Forward Markets Commission should frame regulations, which will motivate the investors to trade in commodities with lesser margin to the intermediaries with a balanced growth for the individual as well as for the economy. The study area has provided an outline of the investment pattern of the traders and the investors and their preferences and expectations from the market.

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Is There Underpricing After IPOs

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Abstract. This study aims to analyze the underpricing phenomenon and financial factors that influence underpricing, such as debt-to-equity ratio, age, and company size. Underpricing is detrimental to the company because the funds obtained are not optimal. When underpricing occurs, investors can get a positive initial return. It is inversely proportional to investors. This study will use the quantitative method with multiple regression as the data analysis method. The data used are secondary data derived from the prospectus and the company's financial statements after the Initial Public Offering. The sample of this research is 151 companies listed on the stock market in Indonesia for the period 2020–2022. This study logically wants to educate investors to calculate and analyze before deciding to purchase initial shares at the time of the IPO so that there are no more losses resulting from making decisions based on psychological effects as happened to issuers with big names but does not provide a positive initial return for investors.

Keywords: Initial public offering · underpricing · Initial return · Debt to equity ratio

1 Introduction

Initial Public Offering (IPO) attracts much attention from the public or investors. Companies that already have big names that stick in the minds of the people are usually very much in the future for an IPO. IPO empirically has three subjects that always cause anomalies, namely Short-Run Underpricing IPO, Market Phenomenon, and Long-Run Performance [1]. Psychologically, investors expect to generate positive anomaly returns on initial returns. Investors expect prices to rise in the secondary market so that there are profits to be made. This expectation occurs because investors' psychology plays more of a role in purchasing decisions than logical or rational ones. Companies conducting an IPO must issue a prospectus as an initial fundamental analysis for investors. A prospectus will be very petrified investors. Psychological investors can lead to investment losses. In an IPO, when the offer price is lower than on the first trading day, it is called underpricing [2].

Prices that occur during the listing of issuers are underpricing and overpricing [3]. This mini research focuses on the occurrence of underpricing phenomena in companies that are conducting initial offerings to the public. Underpricing is, of course, detrimental to the company because the funds obtained are not maximal. It is inversely proportional

to investors. When underpricing occurs, investors can get a positive initial return. The price formed at the initial offering is the price between the underwriter and the issuer. The shares distributed are influenced by investors, while investor sentiment in determining the IPO price during the offering period up to the secondary market is influenced by the underwriter [4]. The company (issuer) is interested in the IPO to meet the company's internal financial needs, so the issuer must minimize underpricing.

From 2022 to August 31, 2022, there were 43 new issuers to conduct initial offerings and 23 prospective issuers until September 2, 2022. This number increased from 2021, when only 28 new issuers were registered [5]. A large number of new issuers is two sides of the coin. Many issuers want fresh funds according to their needs. On the other hand, investors wish for a positive initial return. The phenomenon of underpricing IPOs is an exciting thing for investors. The prospectus published in official IPO institutions shows issuers' allocation of fresh funds.

This research logically wants to educate investors to see and calculate before purchasing initial shares at the time of the IPO so that there are no more losses resulting from psychological-based decision-making as happened to issuers with big names but does not provide a positive initial return for investors.

2 Literature Review

The IPO raises capital, allowing the company to grow to expand internationally and providing liquidity and diversification opportunities [6]. Research related to underpricing IPOs has existed for a long time using different variables. [7] Measuring performance after the IPO showed a significant decrease in performance as measured by ROA. Underpricing in China can be reduced by Confucianism [8]. The IPO is expected to have a positive impact on investors and issuers. For issuers, IPOs play a vital role in the financial system. Companies obtain financial capital and provide investors with tradable assets [9]. Underpricing occurs when the price on the initial share is lower than the price on the first day in the secondary market. In general, underpricing is explained by asymmetric information and risk [10].

The number of stock investors in Indonesia is increasing from year to year. Data published by KSEI [12] states that the growth in the number of investors in stocks and other securities over the last four years was 1,104,610 in 2019, in 2020, it was 1,695,268, in 2021, it was 3,451,513, August 2022, was 4,137,997. This number shows the increasing interest of the Indonesian people in investing in stocks. Several countries confirm positive initial returns in many markets [11]. Initial return is the profit investors can obtain from the first share price lower than the opening price on the secondary market on the first day [13]. Initial return is measured by the closing price of the first day on the secondary market [14]. Research conducted by [15] found that underpricing occurs in insurance companies.

3 Propositions

3.1 Issuing Size, Age, and Underpricing

Age represents the company's history during its operation before the IPO [16], the time interval from the establishment to being listed on the stock exchange [17]. Size is the size

of the offer (number of issues) and is used to identify the ex-ante uncertainty associated with the IPO issue [16]. [18] Revealed that issue size, market, volatility, and reciprocal underwriter status of IPO prices proved to affect IPO underpricing. Underpricing also occurs in Canada with three related variables: trade volume, the company's business sector, and the use of funds from the IPO [19]. Size, and age, are closely related to underpricing on the Chittagong Stock Exchange [20]. About the proposed variable, Firm size and age were also investigated by [21], which concluded that firm size and age affected underpricing [22]. Suppose the size issue affects underpricing. IPOs with high issues volume are usually less underpriced [23].

Proposition 1: Issue Size Affects Underpricing.

Proposition 2: Age Affects Underpricing.

3.2 D/E and Underpricing

Debt to Equity Ratio (D/E) is a debt ratio that reflects the company's ability to meet all obligations and is expressed in percentages [24]. (D/E) is used to measure financial performance, and equity rating is used to ascertain the impact of qualitative aspects of financial statements [25]. [26] No statistically significant evidence links initial returns (overpricing and underpricing) with firm leverage. Findings [25, 27] underpricing is influenced by the debt-to-equity ratio. Financial liabilities have a positive impact on underpricing [28].

Proposition 3: D/E Affects Underpricing.

4 Propose Research Design

4.1 Data Collection

The sample of this research sample is a company that registered for a listing (IPO) in 2020–2022, has a prospectus, and is listed on the official IDX website. There are 151 companies listed on the stock market in Indonesia (44 issuers in September 2022, 53 issuers in 2021, and 51 issuers in 2020), [29]. The data used is secondary data that can access through the official IDX website or other official websites, such as e-IPO. The information that must seek from the sample issuers is the offering price during the IPO, the initial opening and closing price in the secondary market, the daily price in the first month to 12 months after the IPO, and the JCI to determine short-term performance and to determine the phenomenon of underpricing, issue size, since.

4.2 Variables and Measurement

IPO Underpricing

It is said to be underpricing when the offer price is lower than the first trading day of trading [2] and can be measured by finding the initial return using the formulas [8, 26, 30].

$$IR = \frac{P1 - P0}{P0}$$

IR is the initial return, where we can conclude underpricing or overpricing from the results of these calculations. Pt is the closing price on the first day, and Po refers to the initial offering price.

Issuing Size

Issuing size or (Size) is the total price multiplied by the bid price. Age is calculated using the company's age before the IPO. The formula calculates the debt-to-equity ratio (DE) [27].

$$DE = \frac{Total\ Debt}{Total\ Share\ Equity}$$

4.3 Methods of Data Analysis

Multiple Regression

In the analysis, the company's or issuer's characters are used to determine their effect on the initial return. The equation used is as follows:

$$IR = \alpha + \beta Size + \beta Age + \beta DE + \varepsilon$$

where:

IR (Initial Return) is the dependent variable of the Initial Public Offering,

α is a constant,

Size is for variable size,

Age is for variable age.

DE is debt to equity ratio.

ε is residual error.

Data Testing

Data testing consists of the Normality Test with the Kolmogorov-Smirnov significance of 5% with the significance criteria (Sig F) > 0.05. The data is a normal distribution. If Sig F < 0.05, the data is not a normal distribution. The autocorrelation test was carried out by performing the 5% Run Test with the test criteria of significance (2-tailed) > 0.05, meaning no autocorrelation symptoms, and significance (2-tailed) < 0.05, meaning autocorrelation symptoms. Heteroscedasticity was carried out with the Park test of 5% significance with the criteria; if a significant number > 0.05, there was no heteroscedasticity. If a significant number < 0.05 was heteroscedasticity. The multicollinearity test was carried out with the variance inflation factor (VIF). If VIF < 10.00, there was no multicollinearity, and if VIF > 10.00, multicollinearity occurred.

5 Discussion

An IPO is an activity by a company to get funding from the public. IPOs are widely used for research on various topics, most of which contain entrepreneurial aspects [31]. The phenomena of underpricing, hot issue markets, and long-run underperformance have been widespread in developed markets since the 1970s [32]. It is attractive to all parties, namely the company and the community. Companies can get funding according to their needs, and the public can get abnormal returns. People always hope to get a positive return (profit), and the company also wants to fulfill the required capital. Underpricing occurs when the bid price is lower than the price on the first day in the secondary market, and the price difference is called initial return.

Financial factors are crucial for investors to identify before buying shares at the initial offering. Investors must pay attention to the prospectus because the prospectus provides holistic information related to the company, including company activities, business prospects, information on shares offered, plans to use funds, capital structure, and financial data. The prospectus is the most important document for investors because it contains essential information about the company's prospects, including risk factors, use of funds, and creditworthiness [33]. Fundamental factors are critical to see the company's performance as long as it has not offered an IPO. Fundamentals provide information on debt, assets, capital, and profits that can predict the company's health, thus providing confidence in investing.

Size is allegedly related to underpricing. Larger companies expected to have more resources are more likely to push for an IPO than smaller companies [34]. The price and size of the IPO will be determined based on the last day's demand [35] and the size of the supply and used to identify uncertainty [16]. Size in this study is the product of the number of shares times the price. The firm's age was one of the critical factors in examining the IPO sample [25]. The assumption is that the more age the company is, the wiser it is to manage risk, so it is hoped that during the IPO, there will be no losses from the company's side. The debt to Equity Ratio (D/E) is used to determine how much money will be given to business owners as a form of debt.

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The Application of *Ta'widh* and *Gharamah* in the Context of Non-financial Institution

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Abstract. The regulatory framework of Islamic finance in Malaysia makes it abundantly clear that the Shariah resolutions of Bank Negara on *ta'widh* and *gharamah* have a binding effect on Islamic financial institutions. However, the question that needs to be answered is whether such resolutions apply to other types of institutions that engage in financing transactions based on Islamic principles. The main purpose of this study is to explore the concept and application of *ta'widh* and *gharamah* in the context of a non-financial institution and its operation. The data was obtained through a semi-structured interview at a selected State Islamic Religious Councils Institution in Malaysia.

The findings reveal that there are two major forms of contracts that impose *ta'widh* in the institution. Firstly, the contracts involve debt financings, such as buying and selling real estate and financing for the institution's subsidiary companies. Secondly, the contracts do not involve debt, such as supply, service, and property rental. Determining the amount of *ta'widh* varies according to the situations involved in the institution. Until now, there is still no internal or external process that regulates the activities involving the implementation of *ta'widh* at the institution. The findings also show that there is still no specific regulation, law, or fatwa issued on the implementation of *ta'widh* in the institution. This study further proposes a policy recommendation and actual cost determination' parameter for the proper implementation of *ta'widh* in the institution.

Keywords: *Ta'widh* · *Gharamah* · Non-Financial Institutions

1 Introduction

1.1 Background of the Study

In the context of the Islamic Financial system in Malaysia, the concept of *ta'widh* and *gharamah* was introduced and consistently practised based on the resolution issued by the Shariah Advisory Council of Bank Negara Malaysia and Securities Commission, respectively. According to the Shariah Committee of the Security Commission of Malaysia, *ta'widh* is allowed when a customer purposely delays payment under certain conditions.

Based on the regulatory framework of Islamic Finance in Malaysia, there is no question about the binding effect of these resolutions on Islamic Financial Institutions.

However, the question is whether such resolutions apply to other institutions practising Islamic-based financing transactions. Presently, there is no clear guidance and fatwa issued on this matter. The issues of *ta'widh* and *gharamah* are pertinent in the context of financial contracts entered into by Islamic institutions with third parties, such as supplier contracts, investment contracts and the like. Even though the concept of *ta'widh* and *gharamah* is applied consistently in the Islamic Finance industry, there is a question about their application to other institutions operating based on Shariah principles. The Islamic-based institution is expected to operate based on Shariah principles, not only when executing contractual agreements with the third party but also on the imposition of *ta'widh* and *gharamah* in cases where parties defaulted in making payments.

Therefore, this study aims to explore the concept and application of *ta'widh* and *gharamah* in the context of a non-financial institution and its operation. This study will first study the *ta'widh* and *gharamah* from a Shariah perspective and how this concept can be applied to other Islamic-based institutions. Subsequently, this paper will propose a suitable approach to *ta'widh* and *gharamah* to be adopted and applied by other Islamic-based institutions. It is also hoped that this paper will facilitate the issuance of the fatwa on the *ta'widh* and *gharamah* to other institutions carrying on Islamic operations.

2 Literature Review

2.1 The Concept of *Ta'widh* and *Gharamah*

The word *ta'widh* is derived from the arabic word *al- 'iwad*, which means 'instead'. The term *ta'widh* or *shart jaza'i* is interpreted as "a fine as agreed by the parties to the contract as compensation that can be claimed by the creditor when the debtor failed to pay or make late payment of debts" (Yaakub et al. 2014). *Shart jaza'i* means 'the agreement of the parties to do something if they failed to carry out their responsibilities. According to the Resolution of Shari'ah Advisory Council (SAC) of the Central Bank of Malaysia (2013), *ta'widh* refers to the actual losses experienced, which will be assessed and determined by a third party, the Bank Negara Malaysia, which acts as the regulator. As far as *gharamah* is concerned, *gharamah* is referred to a form of fine imposed on an individual for doing something illegal. It is not prescribed in Shariah or something contrary to the country's law or the public system and is inconsistent with local customs (Yaakub et al. 2014). Technically, *gharamah* can be defined as a penalty or charge imposed on customers who delay financing debt settlement over and above the amount of *ta'widh* (Central Bank of Malaysia 2013).

2.2 Permissibility of *Ta'widh* and *Gharamah*

Islam prohibits *riba* and permits halal transactions. Any excessive payment in paying back the loan is *riba*. In the *ta'widh* case, a penalty is imposed because of deferred payment. Question asked, does it consider *riba*? There are four different opinions among scholars regarding this: -

Permissible to Charge in the Form of Money. Firstly, it is permissible to charge compensation in the form of money. The Shariah scholars believe a penalty would be

allowed, and it will go to the bank as an income, provided that the debtor is insolvent and causes damage to the creditor. Though they differ in terms of the type of damage to be compensated, the method of the calculation for the compensation, the determination of actual damage, whether the material damage or undue harm, and the decision maker for the value, is it the court that values or estimates the amount, or would the usual profit calculate it? (Az-Zarqa 1999; Al-Mani', 2003; Ad-Dharir, 1985; Central Bank of Malaysia, 2013).

Ta'widh will be Considered as Riba if a Debtor is Asked to Pay During His Insolvency. Secondly, there is consensus among the Fuqaha that *ta'widh* or *shart jaza'i* would be considered as *riba* if a debtor is asked to pay during his insolvency, mainly when the delay in payment does not cause any harm to the creditor. Among the Fuqaha who are with the view that. Because *riba* means a conditional increase that the creditor takes from the debtor for the delay in payment, this, too, is the fact of the *shart jaza'i*, which is the increase in conditional capital on time. (Az-Zarqa 1999; Al-Mani, 2003; AdDharir, 1985; Hammad, 1985; Syaaban, 1989).

Not Permissible to Impose Compensation for the delay in Payment at All. Thirdly, it is not permissible to impose compensation for the delay in payment. The scholars of this view firmly believe that procrastination from the debtor is faced with legitimate bankruptcy, which does not include financial compensation, whether it takes the form of the specified fine or undefined compensation, and charging late payment is similar to *riba* (Az-Zuhayli 1996; Al-Qurrahdaghi, 2006; Hammad, 1985).

It Should be Penalised in the Form of Money, Which Must be Channelled to the Charity. Fourthly, the scholars opine that penalty is allowed in case of late payment, but it must be channelled to charity based on *iltizam al-tabaru'*, which is permissible in the Maliki school of thought. This means that customers should agree to donate (*sadaqah*) and appoint an Islamic bank in their stead to distribute the *sadaqah* if he fails to commit to the debt payment. If the incurred penalty is surrendered to a third party or incurred for welfare purposes, it can no longer be considered as *riba* (AAOIFI 2010; Usmani 2011).

2.3 The Views on the Determination Compensation Cost

Compensation Based on Actual Cost. Some contemporary scholars viewed that the payment of damages should be according to the actual value of the loss received by the financier. This is based on the hadith that the Prophet SAW has stated regarding the debtor's refusal to repay the loan and deliberately delaying the payment, even though this act is considered an injustice to the financier. They think it is appropriate to punish debtors who deliberately delay and do not repay their financial obligations. Although, the punishment stated is still general and may also involve imprisonment. Furthermore, the hadith has also clearly stated the punishment for debtors who do not seriously repay the debt and can be punished with damages (Syaaban 1989; Al-Tabtabaie 2006). This compensation method is allowed, which only refers to the losses that are lost, damaged and the like (Syaaban 1989).

Compensation Based on Opportunity Loss. Az-Zarqa (1999), Ad-Dharir (1985) and Al-Mani' (1985) agreed that it is permissible to impose compensation charges on debtors who are capable of paying the debt within the stipulated time but deliberately delaying the payment by considering it as an opportunity cost lost (opportunity loss). Opportunity loss refers to the loss of future profit opportunities due to several factors and conditions. In their view, deliberately delaying the repayment is unfair to the financiers as they cannot recover the capital and cannot even make use of it. Therefore, imposing the cost of opportunity loss in determining damages is allowed according to this view (Mohd Noor and Haron 2016).

3 Research Methodology

The research methodology adopted in this study is qualitative, and the data were obtained from the semi-structured interview. A thematic analysis was performed for the purpose of data analysis on the findings of the interview.

4 Findings and Discussion

This study was conducted at one of the States Islamic Religious Councils (SIRC) in Malaysia, and the actual name of the institution is anonymous. This institution opted to keep its actual name to safeguard its privacy and confidentiality with the information given. This interview was conducted according to the sectors involved in implementing *ta'widh* and *gharamah* in this institution. There are four main sectors involved in the implementation of *ta'widh*; the Legal Sector, the Management Services Sector, the Real Estate Sector and the Baitulmal sector. A total of 7 officials were interviewed from different sectors.

Based on the interview conducted with the participants, there were four main themes emerged and they were named and categorized as Process, Quantum, Governance and Regulation. All these themes are discussed in the next section.

4.1 Process

Situations that Require the Implementation of *Ta'widh*. Practically, this institution did not distinguish between the terms *ta'widh* and *gharamah*. In other words, they do not differentiate between fines and compensation. Moreover, the institution did not apply the concept of *gharamah* in its practice. The following were the situations that require the institution to implement *ta'widh*:

Properties

- a) In the sale and purchase of the real estate, *ta'widh* was imposed due to delays in making payments and not making payments within the stipulated period after a sale and purchase agreement was signed.

- b) In the case of project management *ta'widh* was imposed due to a 'breach of contract' and delays in project execution.
- c) In the case of property rental, no *ta'widh* was imposed, but it referred to a 'double fine' to the tenant whose rental period has expired but who is still living on the premises.
- d) The institution also imposed a management charge if the tenant fails or is late to settle the monthly rental along with Government Service Tax on all amounts that must be paid according to the set date.

Supply. In the case of supply, *ta'widh* was imposed due to delays in supplying any services to the institutions. The types of supplies are as follows:

- i) Services supply, such as ICT services, security, and cleaning.
- ii) Maintenance supply, such as building or elevator maintenance.
- iii) Equipment supply, such as printing machine.

Financing for Subsidiary Companies. *Ta'widh* was imposed due to delayed repaying the loan within the stipulated time. In this case, the *ta'widh* was imposed following the practice of Islamic financial institutions in Malaysia.

The Method Used to Claim *Ta'widh*. The implementation of *ta'widh* follows the current practice by considering its suitability to the situations and the contracts involved. Until now, there are still no procedures or guidelines that require the institution to perform *ta'widh*.

Buying and Selling Real Estate. Accordingly, this institution applied the sale and purchase agreement for a real estate sale and purchase purposes. *Ta'widh* will be imposed if the buyer fails to repay the payment within three months from the sale and purchase agreement date. It is either in the form of full payment or the purchase balance.

Project Management. In the case of project management, the practice of *ta'widh* in project management was referred to the existing Base Lending Rate following the practice of the Malaysian Public Works Department.

Property Rental. For the case of property rental, there was no *ta'widh* imposed. The institution practised a double fine which followed the current practice of the district council. At the same time, the period of payment charged was different according to the agreement. Usually, the period of payment specified in the contract was three months after signing or six months. In addition, the payment period will not be extended except with the authority's permission. In some cases, they were unable to pay the rent, and the buyer will request to postpone for a month or two without imposing any fine on them. There were also cases where the committee allows for deferment, but they have to pay 50% of the total debt. The participant further stressed that the late payment charge for rental activities was not considered as *ta'widh* but it was a fine due to late payment. It means that the value of the rental fee was the same, and there was no increase in the principal value.

Supply of Services. For the supply of services sector, a fine was imposed due to the slow progress in in-service performance. The fine was imposed by withholding the monthly payment that must be given to the supplier. However, it was still not regarded as a cancellation of the contract. Moreover, the imposition of *ta'widh* is different according to the types of supplies, such as ICT services, security services and cleaning services, the supply of photocopy machines and the maintenance of lifts and buildings. The method of calculation of *ta'widh* was determined by the parties involved in the contract. They also will propose a fine rate in the offer letter, which was RM100 per day for each delay. Some fines were charged according to percentages, such as 4%. However, it may vary according to the type of service. The institution can also impose a fine of up to RM100 per day for each delay or a maximum rate of 10% of the contract price.

Financing for Subsidiary Companies. In financing the institution's subsidiary companies, the *ta'widh* was carried out by following the existing practice of Islamic financial institutions in Malaysia. Thus, the minimum amount of *ta'widh* charged was 1% of the total loan given to the subsidiary companies. This 1% amount is based on a proposal that the lawyers have recommended in accordance with current practices.

Channelling the *Ta'widh*. The amount of *ta'widh* is channelled to baitulmal, and the money was regarded as an income for the institution. However, there was still no specific use of the money as a result of *ta'widh*, which means that the money as a result of *ta'widh* that went to baitulmal was considered clean money, not tainted money. However, the question arose about whether *ta'widh* should be used for the general public or the institution. This was due to the amount of *ta'widh* received was not known whether it complied with Shariah or not. The absence of specific guidelines on *ta'widh* has created a dispute in determining the proper way of channelling the *ta'widh* money. Due to these doubts and disputes, the law officer believed *ta'widh* money can explicitly be used for the general welfare, not for the institution to pay the salaries or emoluments of officials.

4.2 Quantum

The Amount of *Ta'widh*.

Buying and Selling Real Estate. Most of the amount *ta'widh* charged at the institution was 8%, especially in buying and selling real estate and project management. The imposition of *ta'widh* in the sale and purchase process depended on the decision of the appointed panel of lawyers who was accountable for managing the sale and purchase agreement. The institution was also subject to the decision proposed by the panel of lawyers since the institution did not have specific guidelines regarding the amount of *ta'widh* that should be charged. The *ta'widh* rate set for selling and purchasing real estate was also made following the baitulmal committee's rulings. Usually, two committees facilitated the institution in finance matters: the baitulmal committee and the investment committee. Sometimes, the investment committee can also decide the amount rate that involves investment activities.

Project Management. Meanwhile, for project management, all practices referred to the parameters of the Malaysian Public Works Department, which was the Base Lending Rate.

$$(\text{Prime Rate}/365) \times \text{Contract Value}$$

Property Rental. For the property rental, the amount of the fine was not specified, it was referred to a double fine.

Supply of Services. For supplies, the current rate was RM100 per day of delay, and it must not exceed 10% of the contract price. Sometimes the *ta'widh* amount may vary according to the respective parties of each department who are responsible for determining the amount of *ta'widh* in the tender committee. The cumulative amount of late fines that the Council may impose on the consultant shall not exceed 1/3 of the contract price. The basic calculation is as follows:

$$\text{Fine} = (\text{late penalty rate})\% / 365 \times (\text{Contract Price}) \times (\text{Number of days late})$$

Financing for Subsidiary Companies. The amount charged for the financing of subsidiaries was 1% of the total financing.

Determination of Actual cost. It was found that the determination of the amount of *ta'widh* in the institution did not refer specifically to the actual cost or opportunity loss that actually exists. This was due to no clear guidelines or references for the proper implementation of *ta'widh* in the institution. The actual cost due to late payment was determined by the parties involved in the *ta'widh* of each sector. For instance, if *ta'widh* involves ICT, then the ICT department knows how much they should charge. After that, they need to report to the legal department, and no quantum can be regarded as the actual cost. In the case of property rental, when the first and second notices had been issued to the tenants, but they still fail to pay, this matter will be brought to the legal department. As a result, the legal department will issue a letter requesting that the tenant pay the outstanding within 14 days, along with the lawyer's cost of RM100 per day. If the tenant fails to do so, it will be taken to court to make any claim. In the event of an outstanding amount, the claims are only made against the outstanding rental rate. The notice will be issued to the tenant three times. If the tenant fails to pay even though the third notice has been issued, the lawyer will issue a notice. After that, they must make the payment and including the cost of the lawyer's notice. According to the participant, for the case of renting, the cost incurred also includes the lawyer's notice, and it was considered the actual cost.

Actual Cost Items. It was revealed that the items that refer to the actual cost could not be ascertained. Almost all activities and situations that applied *ta'widh* do not refer to the actual cost. Only in the case of property rental clearly stated that the notice of the lawyer is one of the actual costs that they have to bear. Furthermore, no items refer to the actual cost claimed for the sale and purchase of the real estate. This is because the amount of 8% is derived from the conventional practice in sales and purchase agreements. Moreover, the amount of 8% charged did not refer to any actual cost, although it exists.

4.3 Governance

Internal and External Compliance. Regarding the internal or external compliance process, there were still no mechanisms to ensure Shariah compliance in implementing *ta'widh* in the institution. Most applications were based on mutual agreement and consent between contracting parties. The participant explained that commonly the contracting parties have agreed with the imposition of *ta'widh*, and prior notification has been made in advance and it was mentioned in the agreement. The compliance process was under the supervision of the respective parties involved in the contract. Even though there exists Syariah ISO in the institution whose role is ensuring Shariah compliance in the aspect of documentation for the institution, it was not their role to observe specific compliance in the practice of *ta'widh*. On the other hand, some contracts required the respective parties to seek advice from the baitulmal committee, such as in the case of loans with banks and the issue of *tawarruq*. As a matter of fact, no party will monitor whether the contract signed in an agreement complies with Shariah or not. The draft of the agreement was also implemented according to common practices such as sales and purchase agreements. It was then reviewed by a panel of lawyers appointed for this purpose.

4.4 Regulation

Laws and Enactments. At the moment, there was no specific laws or enactment that requires the institution to perform *ta'widh*. For real estate sales and purchases, the institution frequently refers to the Solicitor Remuneration Orders (SRO) table. Meanwhile, in the case of property rental the double fines were applied following the common practices by the district council as per Civil Act 1956.

Fatwa. Regarding the fatwa, there is still no fatwa issued by any party, including the institution's fatwa committee, regarding the implementation of *ta'widh*. The participant also added that they were only referring to the Shariah resolution of the Central bank of Malaysia regarding the implementation of *ta'widh* and *gharamah*.

5 Conclusion and Recommendation

Based on the finding of the study, a number of conclusions can be drawn. Firstly, there are two primary types of contracts in the institution that involve the imposition of *ta'widh*; the contracts comprise debt financings, which include the purchase and sale of real estate and financing for the institution's subsidiary enterprises. The second type of contract does not entail the incurring of debt, such as one for the rental of property, supply, or service. Secondly, the amount of *ta'widh* that is allotted can vary greatly depending on the circumstances that are present in the institution. Thirdly, no internal or external mechanism governs the activities involved in the *ta'widh* at the institution, and this situation has persisted up until now. Fourthly, there is still no standard regulation, law, or fatwa on the application of *ta'widh* in the institution, except for renting property, for which a double fine is imposed in accordance with the Civil Law of 1956.

Due to the lack of guidelines on the correct implementation of *ta'widh*, this study suggests that the institution introduces a new policy regarding *ta'widh* in the form of fatwa and internal regulation. In addition, the findings of this research suggest that the organisation should create separate accounts in order to facilitate and govern the usage of *ta'widh* money. Besides, this study suggests a parameter for determining actual costs, and those parameters are as follows:

1. *Ta'widh* should be imposed based on the actual losses suffered by the institution due to delays in payments.
2. *Ta'widh* is imposed only on debtors who deliberately delay payment.
3. *Ta'widh* can be claimed based on direct and indirect costs. Direct costs are the costs incurred involving administrative and management costs. Indirect costs are the costs paid to third parties, such as legal fees, taxation and the like.
4. Claims to the actual cost are implemented based on the portfolio (basis portfolio)
5. The rate of the amount claimed must follow the guidelines set by the fatwa.

Finally, since the scope of the study focused only on one particular institution in Malaysia, future research studies can be expanded to other Islamic-based institutions that also apply the concept of *ta'widh* and *gharamah* in their institutions. In this case, other possible issues can be identified due to the different situations and regulations that demand the application of *ta'widh* and *gharamah*.

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Audit Committee and Tax Avoidance: An Empirical Study on Palestinian Corporations

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Abstract. This paper aims to study the effects of the audit committee's characteristics, namely independence, expertise, and size, on tax avoidance. The data was extracted from the annual reports of all non-financial firms listed on the Palestine Exchange between 2015 and 2021. Utilizing linear pooled, fixed effects, and random effects regressions, the effect of audit committee characteristics on tax evasion was explored. The results indicate that audit committee independence and size have a positive impact on tax avoidance, while audit committee expertise has a negative impact on tax avoidance. This implies a lower tax burden for companies with independent audit committee members and larger audit committee sizes, but a higher tax burden for companies with audit committee members with expertise. In sum, the rules governing the formation of an audit committee have an impact on the amount of tax a company must pay, so policymakers should pay close attention to these regulations.

Keywords: Audit committee characteristics · Tax avoidance · Palestine

1 Introduction

By emphasizing tax avoidance behavior, the board of directors seeks to reduce tax expenses that result in a rise in net income [1]. By exploiting tax law loopholes, this behavior would have an important influence on the firm's operational outcomes and financial position [1]. The other side of tax avoidance by the taxpayer is tax aggression [2]. Tax avoidance is when management attempts to avoid or reduce paying taxes in order to lower the effective tax rate and increase net income [3].

Corporate governance characteristics affect a firm's tax avoidance behavior [4]. The audit committee (AC), whose primary responsibility is oversight and supervision, is crucial to the firm's board supervision of tax risks. Prior to being presented to the firm's board, financial and tax aspects are introduced to the AC [1]. In light of this, we inquire whether the characteristics of the AC influence tax avoidance behavior.

Numerous studies [5–7] have examined the connection between governance practices and their influence on tax aggression. However, few studies look into the extent to which AC characteristics influence tax aggression, particularly in the Palestinian context, making this study an opening investigation of the impact of AC features on tax aggression. The Palestinian Corporate Governance Code, issued by the National Committee

on Governance in 2009, mandates that Palestinian companies establish an AC whose members possess independence, expertise, and experience [8]. Compared to neighboring countries, the phenomenon of tax avoidance has increased in Palestine for a variety of reasons: the lack of control over boards and large areas within Palestine as a result of occupation [9–11], the weakness of the tax and legal system [12–14], the difficult economic conditions faced by Palestinian firms, and the taxpayer's low responsibility to bear the public burdens of the state [15]. Finally, taxes are the main source of proceeds for the Palestinian Authority Treasury, accounting for 80.2% of total government revenues in 2020 [16].

This research highlights the negative side of enhancing control measures on the tax burden. The composition of the AC is pertinent when discussing tax avoidance. Results should alert regulators to formulate governance and tax laws in a manner that ensures companies' tax compliance. Next, the paper discusses the theoretical foundation. The third and fourth sections present the methodology and the results, while the final section concludes.

2 Hypotheses Development

2.1 Tax Avoidance

In an effort to maximize the company's profits, managers may evade taxes on purpose [17]. Tax aggression is a management technique employed in tax planning to reduce the tax base. It may involve tax evasion [18] and may be legal or unlawful [19].

Tax avoidance activities are opaque and convoluted, making them challenging to detect in practice. In environments with low levels of transparency, the taxpayer can typically manipulate data [20]. However, the activities conducted by management, including tax evasion, are subject to AC and external auditor oversight [21]. Numerous studies discovered a correlation between tax evasion and agency costs, implying that good corporate governance, including the effectiveness of ACs, has a direct consequence on tax aggression [22–24]. Moreover, information disclosure is crucial because the greater the disclosure, the less tax avoidance and, consequently, the greater the company's value [24]. Nonetheless, some research indicates that tax evasion has a direct influence on firm value and stock return because investors focus on profit size without analyzing its components in detail [25].

2.2 Audit Committee Characteristics

The Palestinian Corporate Governance Code mandates that the boards of directors of publicly traded companies establish an AC with oversight responsibilities over financial matters. Therefore, the formation of this committee should reduce tax avoidance procedures [22]. Recently, the Palestinian Companies Law No. 42 of 2021, Article (188) of the law stipulates that the board of directors of public corporations are required to form an AC, and that the number of committee members shall not be less than three. The committee head shall be independent, and the AC must include at least one independent member with practical knowledge and experience in financial and accounting

matters. There may be three characteristics of ACs that influence tax avoidance: committee member independence, committee expertise, and AC size. In light of the agency problem's conflict of interest, managers seek to increase cash flows after-tax deduction, as tax aggression represents one of the investment opportunities. However, these opportunities may be dangerous because they may result in an increase in tax liability, and may expose the company to penalties, thereby harming the company's reputation if regulatory authorities discover them. Major shareholders do not accept this type of risk because it would have a significant impact on their wealth [23].

2.2.1 Independence of Committee Members

In order to accomplish its supervision and monitoring tasks and preserve shareholder interests, the AC must be independent from management [27]. Companies with a high proportion of independent AC members had a reduced incidence of tax evasion [28].

A study by Deslandes et al. [1] explains that firms with an independent AC would be less tax aggressive, whereas [18] indicates that independent directors reduce tax aggressiveness since the AC is constituted mostly of board members; consequently, they all have a common interest in reducing tax. In light of this, we evaluate the following hypothesis:

H1: There is a positive relationship between AC independence and tax avoidance.

2.2.2 Audit Committee Expertise

By guiding the management, the expertise and knowledge of the AC's members influence the significant strategic decisions of the organization. Experience and knowledge are crucial to the AC's interactions with the management and board of directors [29]. The Palestinian Companies Law stipulates that at least one AC member must have financial and accounting expertise [26]. The financial expertise of AC members gives the committee a great deal more influence over executive management decisions [30].

Members of an AC can gain experience through interaction with other experienced members in order to disseminate expertise and knowledge of control practices [1]. The committee's effectiveness will be enhanced by the diversity of cultural and practical backgrounds, skills, and knowledge, which will provide a variety of perspectives and experiences in monitoring the firm's performance and strategy [31]. In general, the findings of previous research indicate the significance of AC members' practical experience and scientific knowledge in enhancing financial control, including tax management. The committee's ability to make decisions that have a direct influence on the financial performance of the company, including tax management, increases as the committee members' experience increases. In light of this, the following hypothesis is examined:

H2: The experience of an AC is negatively associated with tax avoidance.

2.2.3 Audit Committee Size

The Palestinian Companies Law of 2021 stipulates that an AC should have a minimum of 3 members and at least one of the independent members with financial expertise [26]. The AC's size supports its primary function of monitoring financial reporting. Earnings management is hampered when a significant number of members possess the requisite skills and knowledge [32]. We expect a negative association between AC size and earnings management [33]. The magnitude of the AC correlates positively with the financial reporting quality [34]. The presence of a high number of AC members facilitates the division of work, hence facilitating audits [33]. According to the resource dependence theory, the AC is more effective as its size increases because it can spend more resources to resolve the company's concerns and difficulties. Consequently, we hypothesize the following:

H3: The size of the AC is inversely connected to tax evasion.

3 Approach

3.1 Data

This study is an empirical investigation, and the sample involves all 32 non-financial corporations listed on the Palestine Stock Exchange. The financial sector on the stock exchange was excluded with 15 companies total due to the difficulty of tax avoidance by these businesses, which are subject to stringent regulatory authorities. The study spans the years 2015 to 2021 and includes 224 observations. The information required to test the hypotheses was hand-collected from the annual reports of the listed companies.

3.2 Model and Variable's Measurement

Table 1 displays the measurement of variables. The linear model used to examine the relationship among ETR DIFFERENTIAL and AC characteristics was the following:

$$\text{ETR_DIFFERENTIAL} = \beta_0 + \beta_1(\text{IND_AC}) + \beta_2(\text{EXP_AC}) + \beta_3(\text{SIZ_AC}) + \beta_4(\text{LEV}) + \beta_5(\text{SIZE}) + \beta_6(\text{BSIZE}) + \beta_7(\text{CEODUAL}) + \beta_8(\text{BSKILL}) + \text{eit} \quad (1)$$

Table 1. Measurement of variables

Variable	Ticker	Measure	Empirical reference	Expected sign
Tax avoidance	ETR_DIFFERENTIAL	Tax avoidance = Statutory tax rate – effective tax rate where Effective tax rate = tax expense/taxable income	[23, 24, 35]	Dependent
Independence of Committee Members	IND_AC	The percentage of independent members out of the total members	[1, 36, 37]	+
Audit Committee Expertise	EXP_AC	The percentage of members who have financial, accounting, or practical experience from the members of the AC	[1, 36, 38]	+
Audit Committee Size	SIZ_AC	The total number of AC members	[36, 39]	+
Leverage	LEV	Total Debt/total Equity	[1, 35, 39]	+
Firm Size	SIZE	The natural logarithm of total assets	[35, 39]	+
Board size	BSIZE	Number of directors serving on the board	[40–42]	+
CEO duality	CEODUAL	A binary variable equals 1 if a head of the board is also the CEO of the firm and “Zero” otherwise	[40, 41, 43]	+

(continued)

Table 1. (continued)

Variable	Ticker	Measure	Empirical reference	Expected sign
Board skill	BSKILL	The proportion of directors with a doctoral or master's qualification to the total number of directors	[41]	+

4 Empirical Results

4.1 Descriptive Statistics

Table 2 displays descriptive indicators for the response variable (ETR DIFFERENTIAL), the explanatory variables (IND AC, EXP AC, and SIZ AC), and the control variables (BSIZE, BSKILL, CEODUAL, SIZE, LEV). The mean of the dependent variable “ETR DIFFERENTIAL” is 0.061, indicating that the difference between the statutory tax rate and the effective tax rate is approximately 6.1%.

The majority of AC members are independent, with a percentage of 0.610 for IND AC. The average percentage of the EXP AC is 0.512, indicating that nearly half of the members have experience in finance and accounting. The mean of SIZ AC is 3.013, indicating that the sample companies are committed to the new Palestinian Companies Law's recommendations.

Table 2. Descriptive indicators

	Mean	Median	Maximum	Minimum	Observations
ETR_DIFFERENTIAL	0.061	0.083	2.520	-1.100	223
IND_AC	0.610	0.850	3.000	0.000	223
EXP_AC	0.512	0.660	1.000	0.000	223
SIZ_AC	3.013	3.000	11.000	0.000	223
BSIZE	8.543	8.000	15.000	4.000	223
BSKILL	0.540	0.570	0.910	0.000	223
CEODUAL	0.430	0.000	1.000	0.000	223
SIZE	7.413	7.420	9.690	4.640	223
LEV	0.627	0.460	3.020	0.012	223

4.2 Correlation Analysis

The correlation coefficient is utilized to assess the direction and strength of the correlations between the independent factors and the dependent variable (tax avoidance) in Table 3.

The results reveal a positive correlation between AC member independence and tax avoidance. However, a negative association was discovered between the tax avoidance competence of AC members and the size of the AC. On the other hand, it was found that (BSIZE, CEODUAL, and LEV had an inverse association with tax avoidance, although BSKILL has no relationship. In addition, a link between SIZE and tax evasion was identified. In general, correlations between independent variables are smaller than 0.80, therefore multicollinearity is not an issue.

Table 3. Correlation matrix

Correlation	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) ETR_DIFFERENTIAL	1.00								
(2) IND_AC	0.02	1.00							
(3) EXP_AC	-0.10	0.73	1.00						
(4) SIZ_AC	-0.10	0.38	0.49	1.00					
(5) BSIZE	-0.09	0.21	0.12	0.16	1.00				
(6) BSKILL	0.00	0.32	0.41	0.26	0.38	1.00			
(7) CEODUAL	-0.13	0.04	-0.04	0.06	0.17	-0.04	1.00		
(8) SIZE	0.05	0.27	0.12	-0.08	0.15	0.14	0.19	1.00	
(9) LEV	-0.01	0.05	0.12	0.16	0.12	0.19	-0.13	0.15	1.00

4.3 Estimation Results

Table 4 demonstrates that there is a positive effect of the AC's independence on tax avoidance in Models 1 and 3, meaning that increasing the AC's independence will increase tax avoidance. This, however, contradicts the study conducted by Boussaidi and Hamed [18]. In all models, the expertise of the AC members has a negative impact on tax avoidance. Increasing the experience of the AC will reduce tax avoidance, consistent with the research of Ferreira [31]. Contrary to the findings of Fitri and Siswanto [33], there is a positive effect in Model 2 for the size of the AC, indicating that an increase in the size of the AC will increase tax avoidance. In models 1 and 3, the duality of the CEO has a negative effect, meaning that firms with a dual role for the CEO engage in less tax avoidance. Model 2 concludes that there is a positive relationship between financial leverage and tax avoidance, such that greater leverage increases tax avoidance.

Table 4. Estimation results

Dependent Variable: ETR_DIFFERENTIAL	Model 1 Pooled regression	Model 2 Fixed effect	Model 3 Random effect
Independent Variables			
IND_AC	0.104** (0.051)	0.079 (0.072)	0.105** (0.049)
EXP_AC	-0.180** (0.075)	-0.425*** (0.098)	-0.184** (0.072)
SIZ_AC	-0.004 (0.008)	0.064*** (0.019)	-0.004 (0.008)
BSIZE	-0.013 (0.009)	0.010 (0.023)	-0.013 (0.009)
BSKILL	0.097 (0.094)	-0.039 (0.135)	0.091 (0.091)
CEODUAL	-0.077* (0.040)	0.001 (0.072)	-0.076* (0.039)
SIZE	0.020 (0.028)	0.043 (0.079)	0.020 (0.028)
LEV	-0.006 (0.034)	0.160*** (0.053)	-0.004 (0.033)
C	0.051 (0.210)	-0.442 (0.594)	0.049 (0.205)
R-squared	0.063	0.316	0.061
Adjusted R-squared	0.028	0.143	0.025
F-statistic	1.788	1.821	1.723
Prob(F-statistic)	0.081	0.003	0.095
Durbin-Watson stat	1.312	1.559	1.319
Total unbalanced observations	223	223	223
		Cross-section fixed effect and period fixed effect and robust standard errors	Panel EGLS (Cross-section random effects) with Swamy and Arora estimator of component variances

5 Conclusion

The characteristics of ACs have a significant impact on tax avoidance. While the committee's independence and size have a positive effect on tax avoidance, experience has the opposite effect. We advise boards of directors not to overstate tax planning as a sort of investment that carries legal and reputational risks in its content. The audit committees should maintain fairness and equity, as well as strike a balance between increasing shareholder wealth and meeting tax requirements. Legislators should reformulate the tax law to reflect Palestinian reality as well as the investment promotion law, which is viewed by some corporations as one of their legal options for tax avoidance. Data availability was one of the limitations of this study. Some AC characteristics, like AC meetings, are hard to get data on, so they are ignored, even though they may have an effect on tax avoidance.

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Social Responsibility and Corporate Financial Performance: Theoretical Framework

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Abstract. After many countries abandoned part of their economic and social roles, interest in corporate social responsibility has become an urgent and necessary need for what goes back to society and the companies themselves. Many studies have been conducted linking social responsibility and corporate financial performance, including a positive, negative, or neutral relationship. Against this background, this study aims to highlight the importance of corporate social responsibility by summarizing a number of empirical studies that linked corporate social responsibility to financial performance through knowledge of theoretical concepts and methods of measuring both variables and then defining a comprehensive conceptual model that illustrates the dimensions of this relationship which can A number of future researchers benefit from it.

Keywords: Social responsibility · Financial performance · Market to book value · Corporate

1 Introduction

The economic system in most countries depends on private sector institutions, which constitute a considerable percentage. Also, interest in the concept of social responsibility occupies a large area because it is of great importance in reducing economic and social problems such as poverty and unemployment and reducing environmental problems such as pollution and the waste of natural resources (Al. Najjar 2016). In the year 2005, out of every ten dollars, the US invested one in professional management as a social responsibility, and these investors with social responsibility were very interested in the responsibility of producing external factors that affect the demand for their shares; Accordingly, conclude that corporate social responsibility can either increase or decrease a company's market value. Therefore, companies must increase their market value through social schemes and a competitive stock market (Raza et al. 2012). The social impact of business organizations is a critical issue; therefore, we always find a prominent issue in the modern business world centered on the consideration of decision-makers and managers of organizations and the environmental and social factors in their decisions within institutions (Uadiale and Fagbemi 2012). This paper is crucial as it will serve as a resource for future researchers to review and develop research that supports the concept of social responsibility in the business organization sector by highlighting

several recent studies that link social responsibility and the financial performance of companies. The profit target for companies is a legitimate right; to achieve this goal; it must be linked to continuity. This continuity is only achieved if there is a vital incubator for the company, and this incubator is CRS. The study's significance stems from explaining why corporate social responsibility is so valuable from the point of view of different sectors. This study used a literature review approach and evaluated recent quantitative literature exploring the relationship between CRS and financial performance and providing a comprehensive conceptual framework for future researchers. This research consists of three parts: the first part of the study defines companies' social responsibility and financial performance and ways to measure these variables. In the second part, we discussed the importance of CSR and reviewed several recent articles linking CSR to CFP. In the last part, we designed a comprehensive conceptual framework clarifying the relationship between the two variables.

2 Corporate Social Responsibility (CSR)

CSR is one of the most important issues that still dominates the existing literature, and many definitions of this term contain different points of view (Karagiorgos 2010). Jones (1980) Social responsibility in business Is the notion that companies have a societal duty to represent classes other than shareholders beyond what is prescribed by statute or union contract. The concept of CSR includes incorporating environmental and social standards into business operations and in their dealings with stakeholders voluntarily (Uadiale and Fagbemi 2012). The social performance of companies is measured using annual reports that disclose companies' environmental and social activities in addition to some measures such as multi-faceted CC and CSP standards and many international standards (Alexander and Buchholz 1978).

3 Corporate Financial Performance (CFP)

Financial Performance: Capacity to direct and manage a business's resources; during a certain time frame, a company's financial performance is the total of its capital adequacy ratio, liquidity, debt, solvency, and profitability measures. (Fatihudin and Mochklas 2018).

To find out the level of the financial performance of companies, the analysts perform the financial analysis, which is mean: It is the process of identifying the company's strengths and weaknesses by analyzing the financial statements and linking its elements to each other to extract specific percentages and then comparing the results of the analysis with previous years or comparing them with other companies (Tekatel 2019). There is no consensus on the measurement tool analysts must apply to measure financial performance. Some use accounting measures that focus on the historical aspects of the company's performance, while others focus on market measures that look to the future and focus on market performance which is the company's ability to make profits in the future (Tsoutsoura 2004).

4 The Importance of Corporate Social Responsibility

Interest in CRS has increased, especially as many countries have given up some of their economic and service roles (Elasrag 2011). Hence, companies are no longer seen as a vehicle for making money and delivering goods and services of the highest quality and at competitive prices. Rather, it is also seen as a tool to help local communities live at a good level and in a healthy environment (Carrigan and Attalla 2001). The most important benefits that companies that adopt the idea of CSR receive are: lowering operating costs, enhanced quality of production, increased profits, enhancement of their overall reputation in the local community, and several other benefits (Talhouni 2012). In other words, it can be said that CSR is an investment that returns to companies in increasing profits and productivity, increasing the loyalty of employees and customers, and reducing disputes between management and workers and the environment in which they work (Elasrag 2011). Therefore, implementing corporate social responsibility strategies is necessary to achieve additional benefits for companies by establishing a sustainable business at all levels: 1- At the level of stakeholders: suppliers, investors, and customers. 2- At the administrative and organizational level: reputation, fame, brand, sales, and profits. 3- Eventually, on the environmental level (Ganescu 2012). From the researcher's view, the importance of corporate social responsibility is highlighted by linking it to financial performance. We will get acquainted with this by highlighting several recent empirical studies linking social responsibility to financial performance.

5 Literature Review

(Lin et al. 2009) was aimed to study the relationship between corporate social responsibility (CSR) and corporate financial performance (CFP). The research was carried out on 33 companies in Taiwan. These companies were selected according to different requirements, the most important of which are those listed on the stock exchange and donated at least two and a half million Taiwan dollars. The research model contained an independent variable, a CRS, "Donations were used as a measure of CSR," and a dependent variable, the CFP. The financial performance of companies is divided into two parts: 1- Short-term financial performance "one year" and the Return on Assets "ROA" was used as an indicator of performance. 2- Long-term financial performance-3years "The Jensen measure, the amended Jensen measure, the Treynor measure, the Sharpe measure, and the MCV measure" were used as financial performance indicators. The study results showed that social responsibility had no significant positive effect on corporate financial performance in the short term. However, it has a significant, solid, and positive long-term effect on corporate financial performance.

(Adeneye and Ahmad 2015) this descriptive-analytical study aimed to study the relationship between (CSR) as an independent variable, and corporate performance (CP) as the dependent variable. This study was conducted on a sample consisting of 500 British companies. The data necessary for the study were obtained through the companies' annual and other reports. CSR was measured through the CSR index, while the following indicators, "market to book value (MBV), company size (Size), and return on capital employed (ROCE)" were used to measure corporate performance. The results

showed a strong positive relationship between CSR, MBV, and ROCE. However, the study did not find any significant connection between CSR and company size.

(Maqbool and Zameer 2018) this article also aimed to study the relationship between CSR&CFP of Indian banks, so the selected study sample consisted of 28 private and public banks, and the necessary data for the study was obtained through the annual reports of companies over a period of ten years (2007–2016). The bank's activities were divided into four categories "community, environment, workplace & diverse" to measure the CSR, also the following criteria "Stock Market Return(SMR), Price Earnings (PE), Return On Assets(ROA), Return On Equity(ROE), Net Profit (NP)" was used to measure CFP. (Capital Density, Risk, Size, Age) where used as a control variable. The results clearly showed that corporate social responsibility had a positive impact on the financial performance of companies.

(AL.Najjar 2016) this study was conducted on 28 companies listed on the Palestine Stock Exchange to study the relationship between CSR and the CFP. The researcher used a model consisting of CSR as an independent variable which consisted of four activities related to human resource development, environmental resource development, community service, and product quality. The model also contained a dependent variable that is CFP, and the following indicators "ROE, ROI, ROS, assets turnover, and market value" were used to measure CFP. The most important results of this study are that social responsibility activity related to the environment positively affected "ROA, ROE, assets turnover" the return despite the weakness of social responsibility activities related to the environment among Palestinian companies; there is no effect of social responsibility on the market value of companies.

(Akben-Selcuk 2019) this research differed from the previous three studies as it introduced ownership concentration as a moderator variable for the relationship between CSR and CFP; this analysis was conducted for the period 2014–2018 on 70 non-financial companies listed on the Istanbul Stock Exchange Index (BIST) 100. CFP was measured by the return on assets (ROA), while the sustainability index was used as a CSR measure which included high social responsibility companies. In addition, control variables "company size, leverage, liquidity, exports, diversification, revenue production, and the age of the organization" were applied when testing this relation. Finally, the results showed that a positive relationship exists between CSR and CFP, and findings also indicated that this relationship is negatively moderated by the concentration of ownership.

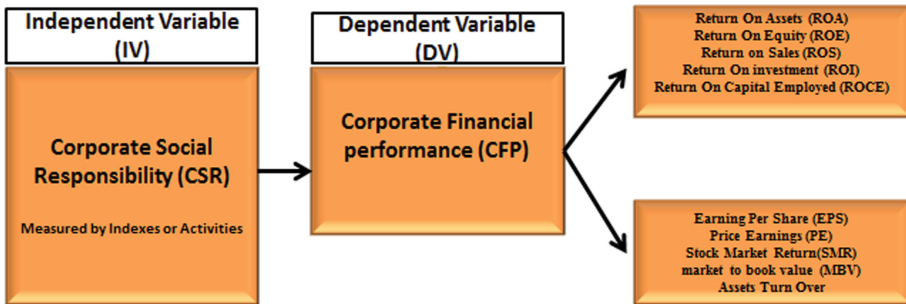
The study of (Lian et al. 2019) differed from other studies in terms of variables where the researcher used CSR as a dependent variable and used CFP as a dependent variable in order to study the relationship between them adding "firm size, leverage ratio" as control variables. The study was conducted on a sample of listed companies in Taiwan, and social responsibility was measured by companies that received the Corporate Citizenship Award through Commonwealth Magazine. While "ROI, ROA, EPS, and Gross margin on sales" were used to measure the financial performance of companies. This study used a quantitative approach, and the findings showed that CSR had a positive and important relationship with the EPS, but only positive and not important for "ROA, ROE, and Gross profit margin."

6 The Empirical Findings

The previous studies that we reviewed have reached several experimental results that may be useful for decision-makers, the most important of which is that marketers and managers within companies must choose their social programs carefully (Lin et al. 2009; Akben-Selcuk 2019) and the CSR must be integrated into their business strategic plans (Maqbool and Zameer 2018; Lian et al. 2019) which can consider as a competitive advantage in the long run for their companies (Adeneye and Ahmad 2015).

7 Conceptual Framework

By reviewing a number of recent experimental studies in pursuit of the relationship between CSR and CFP, we developed a detailed model (a mixture of previous literature models examined in this study); this model demonstrates the elements and variables that can be used by researchers to describe how CSR relates to CFP.



This model developed based on (Lin et al. 2009; Akben-Selcuk 2019; Maqbool and Zameer 2018; Lian et al. 2019; Adeneye and Ahmad 2015).

8 Conclusion

This study focused on the relationship between CSR and CFP by reviewing several research studies and concluding the following:

- Each researcher uses different elements and variables than other researchers, depending on the methods he follows or the available data, because each researcher has a different style and point of view from other researchers.
- The variable of CSR can include activities undertaken by the organization and the categories of these activities that differ from one study to another or can consist of local or international CSR indexes.
- This is also noted because the financial performance variable includes multiple variables and is categorized into financial or accounting metrics. Their usage depends on the researcher's assumptions or the available data quality.

- Most of the research considers social responsibility as an independent variable and the financial performance of companies as a dependent variable. Still, we may find researchers reversing these variables in a study (Lian et al., 2019) where social responsibility was considered a dependent variable and the financial performance of companies as the independent variable.
- To clearly define the relationship between CSR and CFP, some researchers may use control variables (Lian et al., 2019; Akben-Selcuk, 2019; Maqbool & Zameer, 2018; Adeneye & Ahmad, 2015).

Overall, the previous literature we reviewed in this paper showed a positive association between CSR (corporate social responsibility) and CFP (corporate financial results). Most of the research recommended the necessity of activating corporate social activities and including them in their strategic plans. The limitation of this study is centered on the few studies that have been reviewed and their generality. Therefore, future studies should be based on a larger sample of studies and allocate studies to groups such as those focused on developed and developing countries or large companies and SMEs, and compare the results to reach more accurate and generalizable results.

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A Study in the History of Financial Crises

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Abstract. The chapter undertakes a substantial discussion of various financial crises prior and post the 20th century. The chapter first examines the tensions between Efficient Market Theory and the critiques of the Behavioral school who adopt a more psychologically informed approach to financial markets. It will discuss the possible behavioral roots of these crises and give an exposition of the major theories of crisis in comparison and contrast to the behavioral approach to the matter. This will greatly remove the ambiguity surrounding the financial decisions that investors and their advisors undertake. The existing literature on the subject is not fully established and falls at times under conjectures. Therefore, this chapter attempts to capture as much literature as possible and present it objectively, providing criticisms where necessary.

Keywords: Behavioral finance · Financial crisis · Efficient market hypothesis

1 Introduction

Slowly, at the margins, increasing in popularity with every economic and financial crisis that neoclassical economics fails to predict or account for, behavioral finance established itself through a marriage of economics with psychology, or rather an infiltration of the latter in the former. Observing that the neoclassical models were incapable of accounting for such events as crises, irrational decision making, and other factors; psychologists such as Amos Tversky and Daniel Kahneman endeavored to find an alternative approach to make sense of these events that should not even exist according to the theories of microeconomics. However, it would be crude to assign the history of behavioral economics such a beginning.

This study aims to highlight the possible behavioral roots of financial crises and give an exposition of the major theories of crisis in comparison and contrast to the behavioral approach. By presenting the various economic approaches, this study addresses how to understand crises amid the disagreements of the different schools and do crises happen at all? Although an extensive literature review has been conducted for this study based on some keywords, but there might be some of the pertinent studies which have been missed out. The study can benefit financial advisors and investors by removing the ambiguity surrounding the financial decisions that they undertake. This study opens the door upon a question: Who is responsible for the looming crisis in the financial markets? Is the market structurally designed to yield such failures?

The rest of the chapter is organized as follows: Sect. 2 reviews the literature on behavioral finance, while Sect. 3 describes bubbles and crashes. Section 4 compares the global crises of the modern world, while Sect. 5 discusses the theories of crises.

2 Behavioral Finance vs. Traditional Finance

Traditionally, the main proposition of the financial market has been based on the Efficient Market Hypothesis which grants the market the final verdict in terms of outcomes at an ultimate equilibrium and gives the investors the rational capacity to first make decisions in line with their interests and second to value securities rationally. This hypothesis, born in the Chicago School of Economics, dominant after the 1950s, with an immensity of theoretical and empirical support that led the Chicago School Economist “Michel Jensen”, in 1978, to claim that ‘there is no other proposition in economics which has more empirical evidence supporting it than EMH’. While the EMH assumes ultimate equilibrium in the financial market, events in the last few decades have raised the question of whether the financial market per se, creates instability in the macro economy. The stock market crash of year 1987 and the collapse of the financial market in year 2008 have shifted focus towards the notions of bubbles and crashes and their position in the economic structure. Bubbles do not reveal themselves to the investor as a crisis, rather the exact opposite, investors see bubbles as the “inevitable payback for their hard work and virtuous behavior” (Burton and Shah 2013). But once the bubble bursts and the catastrophe take place, the attention shifts towards moral charges of excess, greed, corruption, foul play, and so on. This position comes as an ideological bandage to cover the wound, to allow for the misdiagnosis that won’t threaten the market or deem it unfit. It is the excesses of investors that have led to such a result. In the 1990s, there was a shift from conventional analysis of equity market cycles and the profitability of stocks into implementing cognitive psychology while trading in the financial markets. The connotation of behavioral finance thus was created.

3 Bubbles and Crashes

In 2000, the internet stock bubble that was forming in the 1990s burst. Best (2005) described the phenomenon by saying that the internet stocks “had acquired a form of celebrity status”, in the sense that the prices of the stocks rose above fundamentals in a similar manner as when the salaries of celebrities seem to “surpass the talent of the individual involved” (Best 2005). He draws similarity between the perceptions of celebrities among their fans entails an emotional aspect, and the attachment formed by investors to their internet stocks. Redhead (2008) deemed the media primarily responsible for the promotion and formulation of a ‘culture’ of internet investing. This culture viewed the internet as representative of a new age. The internet fundamentally transformed sociality and people’s self-perception. They came to identify with their extension into the virtual world and the information age that indexed it all (Redhead 2008). Investment in internet stocks came as an extension of their identification with and attachment to the internet. Evidence indicated that internet users may have been quite naive in their investments, particularly due to being highly “influenced by stock recommendations posted” online.

It is suspected that such naive investments may have caused the 1990's bubble (Hirschey et al. 2001). It ought to be emphasized that the shift towards financial capital and the stock market that took place in the late 20th century was not without its media promotion. Shiller (2000) makes the point of how involved the media was in increasing and enhancing its reporting of stock market news. Redhead (2008) introduces the notion of 'momentum' by way of Pepper and Oliver's suggestion that a monetary imbalance persisting in a certain direction for long enough may lead to extrapolative expectations, which is defined as "the tendency to expect that price changes will continue in the direction recently observed". This tendency leads to "momentum trading" which enforces the movement in that specific direction. Consequently, this leads to herd trading which can "overwhelm any tendency for price trades to restore 'efficient' prices". Given this stunting of any corrective mechanism, the rise in share prices may extend and attract more people, mainly uninformed agents, to invest. These people will be under the impression, due to their naivety, that the prices of these shares will continue to rise. The more people invest, the higher prices are pushed.

When Fama was asked about the meaning of a 'bubble' in year 2013, he said that it was meaningless. This is because under EMH "bubbles cannot exist" (Mahajan 2015). The fact that many economists and experts hold this hypothesis so strongly, they could not see the danger of the bubble when it was happening. They saw it as merely an opportunity to profit from the rise in house prices. Additionally, they were incapable of predicting the immense negative effects it would later have. This is not to claim that had economists and people in power been aware of the shortcomings in the EMH worldview, the crisis could have been averted. That may be a near impossible claim to make. However, it could be said that at the very least, the manner by which it was handled could be altered. Szyszka (2010) makes the claim that there was a clear speculative bubble forming during the period when there was "rapid growth of property prices", which was followed by the price rally in the stock and commodity markets. In order for a bubble to emerge, there is a necessity for collective participation, or as EMH shows, the irrational trade will be negated. Szyszka (2010) points out that during the bull market stage leading to the crisis, irrational investors were making uninformed judgments based on naive observations of "earlier increases in prices", a process of imitation. Ignoring the relatively high prices of the assets, their investments were indexed by their expectation that the prices would continue to increase, simply because they already had been. The mechanism at hand is referred to as 'feedback trading'. Given the fact that a collective of investors are buying stocks, other investors will assume that it is possible for prices to continue to rise; consequently, profits to be made (Szyszka 2010). The feedback loop, after being initiated, becomes a "self-fulfilling prophecy", instigating new bouts of demand and activity. DeLong et al. (1990) suspected that rational players can foresee chances of feedback trading and may even instigate them at times (DeLong 1990). Szyszka (2010) confirms that herding does not necessarily have to be the result of an irrational malpractice. On the contrary, herding would take place, while everyone sustains rationality by way of "information cascades" (Szyszka 2010).

4 Global Crises in the Modern World

4.1 History of Crises Prior to the 20th Century

The economies of the world are riddled with crises, to the extent where Kamalodin makes the claim that not a single year has passed throughout the past two hundred years where a crisis did not occur somewhere in the world. Kamalodin (2011) claims that these crises are often preceded by booms and busts in housing and stock markets. He traces the first “international financial crisis” back to 1825 following the overthrowing of the Spanish empire in Latin America. The republics of the continent was “opening up” to international trade, particularly with England, which resulted in an immense capital flow moving from the English capital to fund financial infrastructure, mining projects, and filling up government deficits in those countries (Kamalodin 2011). The result was obviously a boom in the London stock exchange, which led to a crash in the stock market when the “capital outflows impinged on the Bank of England’s gold reserves” leading to the policy rate being raised and then the crash. The halt in capital inflow from London to the Latin American countries opened the doors for debt defaults, bank crises, and crashes in currencies. The next crisis of an international order to hit the world was that of 1873. Initiated by a bust in the German and Austrian property markets, crisis spread through Europe having far reaching effects that spread to the US due to European investor’s choice to forgo US railroad stocks. The crisis once again spread to Latin America due to the BOE’s decision to raise policy rate to halt its gold outflows, thus leading to a series of “debt defaults across the region” (Kamalodin 2011). Less than two decades later, in 1890, another crisis hit the world, in fact, “the world crisis the advanced world had suffered since the end of the Napoleonic era”. Once again, the story revolves in some sense around Latin America which at the time had been opened up to capital influx from Western European countries. Capital went largely into infrastructure. As is the case with any economy in the world, particularly of the third world, a sustained large inflow of capital always finds itself in the property market. This land boom was built on “generous lending from the BoE and other European banks” (Kamalodin 2011) thus making it completely susceptible and open to the effects of any policy changes these countries undertake to govern their finances. The boom finally hit bust when the funding countries decided once again to raise their policy rates in order to cut their losses in gold reserves. As per Kamalodin (2011), banking and currency crises accompanied by debt defaults hit Argentina first and the repercussions bounced back unto England when the huge English merchant bank, which happened to be “heavily exposed to Argentinean debt” hit insolvency. The crisis spread to various Latin American countries and panic spread across Europe, the US, Japan, Australia and New Zealand (Kamalodin 2011).

4.2 History of Crises Post the 20th Century

The 20th century was also met immediately with a crisis of its own, now shifting focus towards the United States which suffered in Year 1907 a 40% fall in its stock market. The fall spread to France, Sweden, Italy, and even Japan, that had become tied to Western capital. Another crisis followed WWI during attempts by countries to control inflation and decrease it after it had “built up” between 1914 and 1918 war years. The reductions in

inflation encroached European economies finally leading to a financial crisis spreading across the Netherlands, Italy, Japan, and others (Kamalodin 2011). And then appeared the Great Depression of the 1930s. It followed a series of crashes in the US and UK stock markets that had been experiencing a massively booming decade post-WWI. The Event took off on the “Black Thursday”, 24th of October 1929 when US traders sold approximately 12.9 million shares in a single day. This was followed by a 23% fall in stock prices and the crisis officially took off (Amadeo 2018). Over the next years, a series of banking crises took place in the US that was not successfully halted by the US Federal Reserve. Upon the crash, investors shifted their money towards the currency market. They traded dollars for gold which at the time was still the peg for currency prior to the introduction of fiat. The Federal Reserve reacted by raising interest rates in order to save the dollar’s value. This in turn, tightened the available money in the market which eventually led to bankruptcies (Amadeo 2018). This was followed by investors withdrawing their deposits leading to a banking failure which was ignored by the government. The depression became worldwide given currencies were fixed to the dollar via the gold standard leading to debt and currency crises worldwide as stated by Kamalodin (2011). The depression was of course followed by WWII. A period of relative stability followed WWII due to the establishment of the Bretton Woods system which was the first monetary ‘world order’ agreed upon by the US, Canada, Western Europe, Japan, and Australia. The agreement entailed pegging money to gold and agreeing that all countries must regulate their monetary policies to preserve the external value of their exchange rates at a percentage of one. However, this did not last long; the imbalance caused by the strength of the US dollar led the system to crash. The systems of fixed capital controls and financial regulations designed to avoid further crises all came crashing and capital flows went wild once again, and with it, financial crises returned as well. This was followed by bank failures across Europe and currency crises across the “emerging world” (Kamalodin 2011). “Tight monetary policy” and recession in Western countries opened the door for defaults in several Latin American countries, issuing in the Latin American debt crisis of 1982 leading to bank failures across the globe, including major US banks. The unhinging of capital under neoliberal rule continued to push economies into crisis during the 1990’s. The fall of the Soviet Union triggered a property bust in Finland and Sweden which had been experiencing a boom in their markets (Kamalodin 2011), issuing the Nordic financial crisis. Other crises were taking place simultaneously in Italy and Australia, along with the European currency crisis and the UK leaving the European Exchange Rate Mechanism. Crises continued during the entirety of the 1990s from Latin America to the East Asia. Over there, an externally financed debt boom crashed abruptly “due to mounting speculation against the Thai Baht in 1997”. This placed pressure on other Asian currencies finally resulting in financial crises in Thailand, Indonesia, Korea, as well as Hong Kong, Malaysia, Philippines and Taiwan. Western countries responded to the crisis by tightening their lending policies which also saw the default of both Russia in 1998 and Brazil (Kamalodin 2011). Kamalodin claims that crises will never cease, and this is because they are due to the impossibility of the homo oeconomicus and the reign of the psychologically driven, largely irrational Homo sapiens.

5 Theories of Crises

Kindleberger (1978) defines a bubble as a “a sharp rise in price of an asset or a range of assets in a continuous process” whereby the primary rise “generates expectations” of future rises, thus “attracting” speculators “interested in profits from trading in the asset rather than its use as earning capacity” (De Grauwe and Grimaldi 2004). The disagreements regarding how to understand crises, and whether they happen at all can be divided roughly into the positions taken up by the Keynesian school, then the Chicago school, and the Austrian school (Gradinaru 2014).

5.1 The Keynesian Position

Keynesians reject the idea that the market has any self-regulating capacities. They believe governments are required to keep the market in check and both avoid and solve collapses and crises. In the classical sense, a Keynesian approach would diagnose the problem as one of insufficient demand. Such a phenomenon is triggered by a variation of causes. Keynes points out that the market’s incapacity to self-regulate is based on two points. First, wage rigidity and second, considering all things constant, interest is not directly influenced “by the increase or decrease of loan funds supply”. According to Gradinaru (2014), the primary emphasis Keynesian theory holds, is the collapse of investment in accordance with lowered consumption. The central claim is that while interest rates may drop, this does not imply that investment would rise. Gradinaru (2014) states that insufficient demand is definitely central to the Keynesian understanding of crisis, and so anti-crisis policies should be aimed at precisely that. This relates directly to income: a decrease in investment implies a decrease in income, which means a decrease in demand for consumer assets. This also implies a drop in demand for capital assets which lead to a decrease of income. This forms a spiral that cannot be escaped without the direct intervention from the governing bodies. However, as Stojanov (2009) shows, Keynes’ conception was not limited in his understanding of insufficient demand to the manner that his predecessors were. While investment consumption was essential to the Keynesian system, as it should “compensate for insufficient personal consumption,” it can be influenced by monetary and interest rate policies. However, that is not the entire story, as the often-neglected aspect of Keynes’ system was his ideas on the declining tendency of marginal efficiency of capital. It is clear from passages in Keynes, “The General Theory of Employment, Interest and Money” (1936), that he observes a structural cyclical movement with an upward and downward shift, the latter of which occurs violently. Then he shifts to talk of the temporality of this movement, indicating that there is a “time-sequence” to the upward and downward shifts. Suddenly, the upward movement “violently converts into a crisis”. However, the process does not reverse in the same manner; rather, it requires an external intervention (Stojanov 2009). Stojanov (2009) concludes that crises, for Keynes, “represent the process of capital depreciation”. The central point to be made by Keynes is that the market is neither capable of avoiding crises nor initiating a recovery from them.

5.2 The Monetarist Position

Monetarism is a school of which the central claim is that “the money supply is the chief determinant of current dollar GDP in the short run and the price level over longer periods”. In short, a monetary policy’s objective is met ideally “by targeting the growth rate of the money supply” (Jahan and Papageorgiou 2014). At the foundation of monetarism lies the Quantity Theory of Money, an identity in accounting, an uncontroversial axiomatic assumption. As per Jahan and Papageorgiou (2014), the theory claims that “the money supply multiplied by velocity equals nominal expenditures in the economy”. It is precisely in the monetarist assumption that velocity is stable, which implies that “nominal income is largely a function of the money supply” (Jahan and Papageorgiou 2014). Contrary to the Keynesians, the Monetarists hold the belief that markets “are inherently stable in the absence of major unexpected fluctuations in the money supply” (Jahan and Papageorgiou 2014). These fluctuations are usually caused by government intervention, according to the Monetarists. They also believe, in contrary to the Keynesians, that in the long term, the market is capable of reconfiguring itself into equilibrium in such a manner that resolves any “trade-off” between employment and inflation as noted by Jahan and Papageorgiou (2014). In terms of crisis, for example that of 2008, the monetarists hold that the central issue was that central banks were giving out too many cheap and overly-accessible loans. This has caused exponential growth in prices of assets, in this case real estate in particular, culminating ultimately in the formation of a bubble (Gradinaru 2014). Both consumers who could no longer pay back their loans and the financial institutions that had purchased supposedly secured mortgages were exposed to losses and bankruptcy. According to Gradinaru (2014), the Monetarist solution to the crisis was that the Central Banks ought to increase money supply by basically bailing out banks through an injection of money for them to purchase state bonds that will give them the capacity to finance state projects.

5.3 The Austrian School

Another school that believes in the efficiency of the market and the detrimentality of government intervention is the Austrian school, of which perhaps the main proponent, was Friedrich Hayek. They deem crises as invariably a monetary matter instigated solely by government intervention due to its “distorted, destructive interventions” (Gradinaru 2014). The Austrians believe that state interventions support expansionism in crediting whereby the illusion of the presence of money is supported but without there being enough resources in the economy to account for it. This means that the economy is “inundated with false money” lacking support from assets and services in the real economy (Gradinaru 2014). This leaves players in the economy with an incapability to make the right decisions neither in terms of consumption or investment. This false money does not even immediately find itself in the real economy by leading to an increase in prices of goods; rather it goes into investments in real and financial assets. In such a situation, the banks fall into a competition to provide the best loans, which allows society as a whole to live in the illusion of abundance. As per Gradinaru (2014), the market experiences record breaking heights in stocks and property prices, producing a speculative self-maintaining boom. At some point this illusion is forced to pop due to either the

Central bank attempting to control inflation, or because the investors are “bargaining to increase the risks they’ve upheld”. The Austrians held the belief that the only way a government could aid in reconfiguration of an economy in crisis is by completely staying out of it by committing to a “rigid laissez faire policy”. What the government can do however is focus on controlling its inflation and reducing its budget (Gradinaru 2014).

5.4 The Behavioral Approach

The schools previously discussed (with the exception of Keynesianism in some of its strands) build upon the EMH discussed earlier, and therefore believe in the fundamental rationality of the players in the market. In short, they believe in homo-oeconomicus, a fully rational, personally self-interested, and structurally incapable of overcoming the totality of the market. Though it cannot be said that the behavioralists propose a competing theory, rather that they posit critical approaches to classical questions by calling upon non-economic disciplines, mainly psychology and sociology to explain behaviors that take place on the level of the individual and the collective that cannot be deemed rational by economic standard. The Behavioralists believe that while the proponents of EMH place the individual at the core of their theories, they fail to account for the psychological determinants of the individual. Contrarily, they only employ the individual as a signifier of the individualism of their theories and no more. For EMH to work, it must postulate that the homo-oeconomicus is employing all the information at hand in accordance with the correct rules of rationality and thereby can make correct decisions. The profound uncertainty associated with the ‘unknown unknowns’ during the crisis resulted in panicky selling by investors, sharp cuts in payrolls by employers, and significant increases in households’ precautionary saving” (Kamalodin 2011). One position that is held by behaviorists is that a bubble is usually formed when investors come to a disagreement regarding the future prospects of a given asset and are thus faced with an immediate short term sale constraint (Gradinaru 2014). The theory claims that in such a situation there will generally be two kinds of investors: those who are optimistic about the prospects of the asset at hand, and those who are reserved.

The prices at that time would generally reflect only the perspective of the optimistic investors since the reserved ones will ‘sit one out’. As Gradinaru (2014) concluded, the above means that the “asset will be overstated”.

Another theory states that bubbles are generally a symptom of retrospection. The investor sees the past in the future, forming patterns that attempt to predict the future based on what was going on thus far.







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Tax Policy of the State as a Tool for International Trade Regulation

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Abstract. The article deals with the problem of tax regulation of international trade. In the research the concept of “international trade” and factors affecting it were analyzed from theoretical perspectives. The authors also scrutinized the dynamics of the balance of payments of goods and services of Ukraine for the period 2021–2022. Besides, the dynamics of Ukraine’s foreign trade by geographical regions was the subject of analysis. The findings indicate that during the analyzed period, the export of ferrous and non-ferrous metals, mineral products, engineering products, chemical industry goods, etc. dropped significantly. Meanwhile, the share of exports of vegetable products, grain crops, fats and oil increased. Due to hostilities on the territory of industrial regions of Ukraine the country witnessed a decrease in the export of products of the metallurgical sector. This led to a shift in Ukraine’s exports patterns showing an increase in exports of crops.

It was determined that the development of Ukraine’s economy in the conditions of martial law requires elaboration of tools for regulating foreign economic activity. One of the key tools is the tax policy of the State. Tax policy is implemented through the definition of taxation subjects and objects; elaborating principles, mechanisms of taxation; clarification of tax types and rates; introducing tax exemptions, quotas, tax discounts, special tax regimes, etc.

Overall the article examines tariff and non-tariff instruments of international trade regulation. The impact of indirect taxes on international trade is also analyzed. Changes in tax legislation aimed at stabilizing international trade under martial law were considered in order to define and suggest a system of tax measures to stimulate the development of international trade.

Keywords: International trade · Foreign trade relations · Export-import operations · Tax policy · Tax instruments

1 Introduction

Military actions that are taking place on the territory of Ukraine aggravate its economic exhaustion. Nowadays it is urgent to implement such an economic model that would contribute to providing sustainable financial backing of the main State functions not only at the expense of the country's internal capabilities, but also due to the support of external allies. The economic development of Ukraine, in the conditions of martial law, is impossible without its active involvement in trade relations with the leading countries of the world. It is international trade that compensates for the insufficient supply of resources and goods, especially those produced and mined in the temporarily occupied territories of Ukraine. International trade contributes to the growth of national income as a result of development of industrial capabilities, that is, the stabilization of the country's economy. The boost export-import relations, is impossible without the use of generally accepted and proven tools. We deem that tax policy of the State plays an important role among the tools aimed at stabilization of international trade relations. In order to promote the development of international trade in wartime, the State must adapt the tax burden and tax rules to wartime conditions. Therefore, primary and foremost task for Ukraine is to achieve a balance between tax restrictions on export-import transactions and achieve stable revenues to the State budget.

2 Relevant Research

Currently the world economic system is impacted by various phenomena and processes that shape content and define trends of globalization processes in economics. Analysis of scientific research indicates that the current state of international trade development is considered from the perspective of globalization transformations. According to Ivashchenko (2016), the globalization of commodity markets involves the globalization of both 'end product markets' and 'raw material markets'. According to the author, countries are interdependent in the global economy. Enterprises operating in the global dimension are forced not only to export goods, but also to strive to achieve the status of global exporters. In particular, Boyko (2022) analyze the current state of Ukraine's foreign trade by considering the dynamics of the balance of payments and the development of international trade in the context of globalization. Alaverdyan and Romanenko (2019) analyze the development of Ukraine's foreign trade in terms of the commodity structure of export and import operations; consider main financial and economic indicators. The authors highlight various globalization socio-economic and political factors influencing foreign trade relations.

According to Pahucha (2017), free international exchange provides a variety of goods on the market. The more goods and services a country produces for export, the better its position in the world market. At the same time, the author defines the factors affecting the development of international trade. Nevertheless, Pahucha (2017) does not clarify the tools to transform State's foreign economic activity into a real factor of the State's internal economic growth. Based on the above mentioned research, it is worth noting that the intensification of international trade and the growth of globalization of commodity markets require the compatibility of tools and practices for stimulating foreign trade.

In particular, Davydenko (2020) notes that the development of international trade is impacted by various trade barriers, which has led to an increase in the use of tools for tariff and non-tariff regulation of international trade. Taxes and fees are an effective economic tool in Ukraine. Despite significant progress in the unification of rules for the application of financial instruments in the sphere of taxation, the leading role is played by national regulators of state tax policy. As Nikitishin (2016) notes: “Tax policy of a State is a set of organizational and legal norms, principles, methods and forms, subjects and objects of State regulation of tax relations through a system of various instruments with the aim of ensuring the socio-economic development of the country”. Development of Ukraine’s economy in the conditions of martial law requires a permanent search for tools to regulate foreign economic activity. Considering the issue of tax stimulation of international trade, Nikitishyn (2016) reflects on the most common tools of tax regulation of foreign economic relations and defines the following: choice and setting of reasonable tax rates; deferral of tax and fee payments; tax amnesty; international agreements on avoiding of double taxation; tax vacations; tax deductions.

Meanwhile, Chinchyk and Golubka (2020) define the following economic and administrative instruments of tax regulation of international trade as the most important: the ratio of direct and indirect taxes; tax rate; tax exemptions; clear and transparent approach to defining taxable entities; clear procedures of tax and fees charging, their withholding and payment; clear definition of tax objects; clear procedures for determining the tax base; terms of payment of taxes and fees; tax control; tax deductions. Thus, despite a fairly large number of scientific studies in this dimension, the strategy of enhancing the tools for tax stimulation of international trade in wartime conditions still requires its elaboration. Therefore, there is a task of carrying out a balanced tax policy aimed at increasing and improving Ukraine’s foreign trade turnover, attracting foreign capital to the national economy, and ensuring the State’s performance of its immediate functions in wartime conditions.

3 Statistical Dimensions of Ukraine’s International Trade

During war time, it’s international trade relations that become a powerful channel for supporting Ukraine by the world community both financially and economically. Taking into account the sharp reduction in domestic industry output and excessive export orientation, the use of tax instruments to stabilize international trade affects the development of the country’s foreign economic relations.

States’ foreign policy comprises a whole spectrum of various connections and relationships of subjects and objects of policy, and a significant share of these relations are pivoting within framework of international trade. Despite the great difficulties in the conditions of the war, Ukraine demonstrates active foreign economic activity. It consists of international trade in goods and services, direct foreign investment in the economy of the state. The basis of Ukraine’s foreign economic activity is its international trade, which is represented in two main forms: export and import. The proportional ratio of export-import transactions helps to ensure the State’s balance of payments (Table 1).

According to the data of the National Bank of Ukraine, at the end of June 2022, the deficit of the balance of payments of goods and services of Ukraine was USD 3,019

Table 1. Dynamics of payment balance for goods and services in Ukraine (in million USD)

Item of pay-ments balance	2021						2022					
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jan.	Feb.	Mar.	Apr.	May.	Jun.
Balance of goods and services	-49	-205	-545	207	504	-111	235	-484	-301	-1102	-2129	-3019
Balance of goods	-388	-497	-884	-137	196	-346	-359	-975	346	-308	-1082	-1840
Export of goods	3560	4096	4826	4909	5158	4893	5593	4966	2292	2385	2659	2947
Import of goods	3948	4593	5710	5046	4962	5239	5952	5941	1946	2693	3741	4787
Balance of services	339	292	339	344	308	235	594	491	-647	-794	-1047	-1179
Export of goods	1245	1252	1371	1457	1372	1455	1688	1711	1051	1136	1245	1207
Import of goods	906	960	1032	1113	1064	1220	1094	1220	1698	1930	2292	2386

Source: National Bank of Ukraine 2022

million (in June 2021, the deficit was USD 111 million). In June, the deficit of the goods balance of payments amounted to USD 1,840 million (in June 2021 it was USD 346 million). The amount of export of goods reached USD 2,947 million. Compared to the same period of the previous year, the export of goods decreased by USD 1,946 million (39.8%). The import of goods decreased in June 2022 by USD 452 million (8.6%). Compared to the previous month, the export of goods increased by 10.8%, and their import by 28.0%.

Considering the commodity structure of export operations (National Bank of Ukraine 2022), it is worth noting the change in the share of trade of strategically important goods for Ukraine. The export of ferrous and non-ferrous metals dropped by 64.2%, mineral products—by 62.4%, engineering products—by 47.5%, chemical industry goods—by 52.4% and others decreased significantly. At the same time, the share in the total volume of exports of vegetable products, grain crops, fats and oils increased. Due to hostilities on the territory of industrial regions of Ukraine we are observing a drastic decline in the export of metallurgical industry products. Therefore, there are transformations in export patterns with an increase of the share of crops.

The volume of goods imported reached the amount USD 4,787 million. Although the volume of imported goods decreased (compared to the same period of the previous year), no significant changes were observed in the structure of imports in the context of the largest categories. A significant transformation happened to energy flows and

distribution patterns in Ukraine. While energy imports increased by 35.4%, non-energy imports decreased by 16.9%.

The trade deficit in services reached USD 1,179 million at the end of June 2022. The negative balance of the import of services increased is due to the significant expenses of Ukrainian citizens who are abroad and short-term migrants. The decrease in the export of services was influenced by the reduction of transport services (sea, air, railway) by 38.4%. The geographical structure of Ukraine's export-import operations has undergone significant changes (Table 2).

Table 2. Dynamics of international trade of Ukraine (by geographical regions)

Regions	June 2021		June 2022		% in relation to the same period of the previous year
	USD, mln	% of the total	USD, mln	% of the total	
Exports					
Europe	2010	41,1	2178	73,9	108,3
Asia	1673	34,2	452	15,3	27,0
America	203	4,2	113	3,8	55,6
Africa	365	7,5	41	1,4	11,2
Australia and Oceania	6	0,1	1	0,0	16,9
Total	4893	100	2947	100	60,2
Imports					
Europe	2358	45,0	2605	54,4	110,5
Asia	1406	26,8	1353	28,3	96,2
America	353	6,7	217	4,5	61,5
Africa	68	1,3	31	0,6	45,6
Australia and Oceania	13	0,2	3	0,1	23,1
Total	5239	100	4787	100	91,4

Source: Authors' calculations based on National Bank of Ukraine

In June 2022, in nominal terms, exports to Asian countries decreased the most – by USD 1.2 billion (73.0%). As a result of military operations in Ukraine, China stopped importing iron ore and a considerable share of Ukrainian agricultural products. Turkey stopped importing metal products from Ukraine. Exports to the CIS countries decreased significantly—by USD 476 million (77.7%) and African countries—by USD 324 million (88.8%), which is due to the lack of grain export to the countries of North Africa. Meanwhile, exports to EU countries increased by USD 270 million (14.5%). As a result of simplification in logistics regulations, the export of Ukrainian agricultural goods to EU countries has increased significantly.

The number of Import operations decreased the most for the CIS countries - by USD 733 million (78.6%). Imports from American countries also decreased significantly - by USD 136 million, while imports from EU countries increased by USD 337 million (15.8%). This was due to the complete reorientation of the Ukrainian fuel market to the European market. The signing of a free trade agreement with Great Britain became a promising factor for expansion of Ukraine's export-import operations. This greatly simplified the access of Ukrainian goods to the country's market, and also made it attractive for the increase of exports operations.

4 Tax Policy Instruments for Regulating Foreign Trade Relations of Ukraine

International trade is an important indicator of country's economic development and one of the main sources of revenue for the State budget. International trade indicators are indicators used to determine the investment attractiveness and financial stability of a State. Therefore, it is necessary to develop international trade, to ensure the stability of financial inflow nominated in foreign currency. This will allow maintaining the country's gold and currency reserves. One of the key tools for regulating the level of international trade is the tax policy of the State. Tax policy is implemented via the definition and clarification of subjects, objects, elaborating principles, mechanisms of taxation, defining types of taxes and tax rates, introducing tax exemption system, tax quotas, tax discounts, special tax regimes, etc.

Tariff and non-tariff instruments are widely applied by the State to stimulate foreign trade relations in the conditions of globalization and transformational processes. Tariff instruments are based on the Customs Tariff of Ukraine (the document defines import duty rates levied on goods imported onto the customs territory of Ukraine). Application of tariff instruments is regulated by the Law of Ukraine "On the Customs Tariff of Ukraine" (Law of Ukraine 2022) where special types of duties (anti-dumping, compensatory, special) are defined. Tariff instruments are aimed at supporting and protecting national vendors and entrepreneurs, and have a significant impact on the financial results of entities involved in foreign economic activity. If necessary, such tools make it possible to make exports cheaper and imports more expensive. Non-tariff instruments rely on the following: licensing, currency restrictions, tariff quotas, subsidies, full or partial embargoes, national and international technical regulations, standards, etc. The use of such instruments directly or indirectly limits the import of foreign goods (services) to the internal market of the country or prohibits it altogether.

Another form of State intervention in international trade and regulation of its volumes is the introduction of indirect taxes. In Ukraine, indirect taxes include: value added tax, customs duty, excise tax. To regulate international trade with the help of indirect taxes, the following are used: differentiation of consumption tax rates, preferential taxation and differentiation of import duty rates. If domestic prices are higher than world prices, then the import of cheap foreign goods can harm national enterprises, lead to a decline in production and an increase in unemployment. In order to prevent negative consequences for national economy State authorities practice increasing the prices of certain imported goods due to the increase in the imports duty. An excise tax is imposed on certain types

of goods, both domestic and foreign, which is included in the price of goods and paid by end-consumers. In Ukraine, excise goods include: alcoholic beverages, tobacco products, petroleum products and some types of vehicles (Zakleka-Berestovenko 2014).

Value added tax (VAT) is an important instrument of tax regulation in international trade. According to the Tax Code of Ukraine, the import of goods into the customs territory of Ukraine (import) and the export of goods outside the customs territory of Ukraine (export) are subject to value added tax. VAT is a tax on final consumption that has turned into a tax on international trade and a tax that allows financial and political corruption to flourish in Ukraine. Export operations are taxed at a zero rate, and therefore the tax liability for VAT is zero, which allows you to receive significant amounts of budget compensation. Ukraine has a leading position among European countries in terms of the level of budgetary VAT reimbursement. Significant amounts of budget compensation to exporters and fraudsters deplete the State budget of Ukraine and it is one of the mechanisms of obtaining illegal benefits.

Operations on the import of goods and services are taxed at the rates of 20% or 7%. Any person or business that imports goods onto the customs territory of Ukraine in taxable amounts is due to pay VAT tax. When importing goods, tax amounts are payable to the State budget before/or on the day of submitting customs declaration (Tax Code of Ukraine 2022).

In order to stabilize domestic economy of the country in the conditions of full-scale military aggression, drastic changes to the tax policy of Ukraine were introduced. In particular, on March 24, 2022, goods imported into the territory of Ukraine were exempted from customs duties and exempted from payment of VAT on operations involving import of goods by tax-payers whose business operates within the simplified taxation system of the first, second and third groups and is due to pay a single tax at the rate of 2%. The procedure for customs clearance of such goods was also simplified. According to the State Customs Service of Ukraine, more than 119,000 cars were imported into the territory of Ukraine under the preferential regime, which led to a drop of revenues to the State budget in the amount of more than UAH 13 billion. In order to prevent further abuses, customs duties and value added tax on imported goods and customs clearance of cars were returned as of July 1, 2022 (State Customs Service of Ukraine 2022).

Ukraine is about to introduce an additional 10% tax on the purchase of foreign currency. The tax will be levied on all operations of importers, regardless of the type of product. According to officials, this additional tax should encourage Ukrainians to buy less imported goods. As a result, the rate of capital outflow from the country should be reduced, the balance of payments is to be stabilized and the budget deficit should be reduced as well. However, taking into account inflation rates of the national currency, introduction of such a tax will cause a significant increase in the price of imported goods. Additionally, a significant part of imports consists of essential goods, medicines, fuel, fertilizers, products that are not produced in Ukraine or are produced in limited quantities. Therefore, introduction of a new tax will not only lead to an increase in the price of these goods, but may also cause a deficit and trigger further inflation round. Customs duty is another indirect tax that has a significant impact on international trade. In Ukraine, there is a rather complex system of charging customs duties, which includes more than 115 types of customs rates. Also, according to Ukrainian legislation, customs

duties can be charged depending on the price of a product or its physical parameters (e.g. its mass), which makes the taxation process more complicated.

On July 27, 2022 the Verkhovna Rada (the Supreme Council of Ukraine) adopted Law of Ukraine No. 2458-IX “On Amendments to the Customs Code of Ukraine about Regulating the Procedure for Preparing Customs Declarations for Different Types of Goods in Compliance with the Customs Code of the European Union.”. The law introduces changes to the procedures of declaring different types of goods: now commodities which belong to different categories (according to Ukrainian Classification of Goods in Foreign Trade) shall be declared as a batch according to one classification code (Law of Ukraine 2022). Such changes make it possible to harmonize the customs legislation of Ukraine and the European Union and facilitate the circulation of goods between countries.

The subject of excise tax is the sales and imports of excise goods. At the same time, operations that are not subject to taxation are export operations that, on the date of submission of the excise tax declaration, are provided with a customs declaration, as well as operations for the sale of electric energy produced by cogenerating power plants and/or from renewable energy sources. As for import operations, exempted from excise tax are the operations of importing into the customs territory of Ukraine previously exported excise goods, which turned out to be defective, and which will not be subject to further sale on the customs territory of Ukraine.

5 Conclusions

Effective international trade is a key factor in the economic development of any country. It creates opportunities for expanding the sales markets of goods, stimulates the development of innovation, contributes to the increase the inflow of foreign currency and strengthens the country’s economy. In conditions of current challenges and Ukraine’s exposure to war international trade is considered as a rescuer of national economy. However, in order to stimulate the development of international trade, especially in the conditions of martial law, it is necessary to revise the tax policy in terms of regulating international transactions. Namely, we consider it appropriate to introduce changes to the current legislation and regulatory mechanisms. In particular, it is worth reducing the value-added tax rate for export-oriented sectors of the economy. Such industries in Ukraine include agriculture, metallurgy, mechanical engineering, light industry, and chemical production. It is worth establishing differentiated VAT rates depending on the volume of exported products in the range from 5% to 10%. The reduction of the VAT rate will reduce the burden on enterprises and will enable them to accumulate the larger amounts of working capital, and will not have negative consequences for State’s budget filling. It is also worth improving the VAT administration procedures, namely changing the moment of tax liability i.e. using the single event of product shipment for taxation procedures. Such measures will make it possible to reduce possibilities for manipulations in obtaining a tax credit and increase revenues to the State budget. Besides, receiving prepayments for the goods to be shipped will increase the company’s current assets and direct them at expanding the scope of business activities. In order to increase the volume of international trade, it is advisable to simplify the system of charging duties and reduce






the types of customs rates. The implementation of such changes will contribute to the elimination of obstacles for development of international trade and will strengthen the domestic economy.

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The Role of Governance, Leadership in Public Sector Organizations: A Case Study in the UAE

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Abstract. Leadership, governance, and management are among the most prominent components of an organization. These components contribute to adopting new trends and dealing effectively with the challenges by introducing, designing, and practically implementing the organizational strategies to improve productivity. This study also highlighted the role of leadership, governance, and management in accelerating organizational productivity. The researcher also proposed a potential mediation of organizational strategies in improving productivity. To empirically investigate the proposed relationship between study variables, the researcher gathered data from $n = 230$ individuals currently working in the UAE-based private telecom companies. Findings indicated that leadership, governance, and management are significantly playing their role to improve productivity. However, results also showed a mediating role of Organizational Strategies as indirectly affecting the relationship between leadership, governance, management, and improved productivity and strengthening these relationships at maximum level. Thus, the researcher concludes that governance, management, and leadership are the regulating agents of an organization. Here, the role of strategies is of greater significance as they help an organization accelerate its growth, serve the interests of organizational members, reduce the risks, increase productivity, and help an organization to achieve competitive advantages.

Keywords: Organizational strategies · UAE · Governance · Management · Leadership

1 Introduction

Increased organizational challenges in both national and international level business arenas question the survival of an organization in the best possible manner. In this regard, increased productivity is the first and foremost consideration, that ensures the survival of an organization [1, 2]. According to Kumar et al. (2016), our living standards and wealth can be determined directly by our product development process. Today, improving organizational productivity is one of the mainly focused goals of every organization. The primary reason behind the utmost importance to improved productivity is maximum

individual and collective benefits for all the involved parties. For example, improved productivity leads to an increased work performance that eventually brings out prominent economic growth and social progress [4]. Besides, improved organizational productivity also provides the workforce with improved working conditions, better salaries, increments, and support from the organizational stakeholders and leaders [5]. Improved productivity also enhances organizational competitive advantage through improved quality output and cost reduction [6–8]. Besides, improved organizational productivity also works as a positive and progressive change in work management, organization, and production. These changes mainly involve improving the control systems, the widespread development and recognition of automated control systems, personal and technical training of the workforce, improvement of ancillary units, and improved labor and distribution cooperation [9]. Thus, all these factors have made organizational productivity worthy of attention. Therefore, looking at its antecedents is very important to ensure organizational survival and long-term success [4, 10]. Now both private and public sector enterprises focus on their productivity as it also contributes to poverty reduction and improving living standards [3]. However, certain factors provide a direct pathway to improve the organization's productivity such as strategic management, leadership, organizational governance, policies, and workplace environment [11, 12]. Desjardins (2017) highlights the role of leadership and its focus towards leadership tasks that further improve the workforce performance. Similarly, good practices in governance and management indicated idealistic attributes to sustain better work performance and increase organizational productivity [14]. For example, the private healthcare sector in the United Arab Emirates is famous for its strategic management and employees' friendly policies, which are liable for increased organizational performance and productivity. Here besides getting an advantage from local and foreign healthcare experts, the organizational stakeholders also facilitate their workforce by proposing improved policies and successful execution of strategies [15]. As a result, today the United Arab Emirates is a hub of business stakeholders, where private organizations provide equal opportunities to all and significantly contributing to the economic development of the whole Middle Eastern region [15]. Once again, this gigantic privatization of business organizations in the United Arab Emirates is due to internal cooperation, aimed at mutual benefits providing socio-economic benefits at the collective level [16].

Hence by keeping in view the above-mentioned factors in improving organizational productivity, this study aims to assess the direct link between governance, management, and leadership for improved organizational productivity [17, 18]. Considerably, many studies focused on these three factors (individually) to assess their impacts, yet the literature indicates a gap where all these factors will be unified in a single investigation. The researcher empirically investigated the above-mentioned link, however, the aim is to provide in-depth details by focusing on the role of strategies when assuming a potential relationship between governance, management, leadership, and improved organizational productivity.

2 Literature Review and Hypotheses Development

2.1 Governance and Improved Productivity

Governance is a central topic of attention in both developed and emerging economies. For organizational stakeholders, governance is a crucial factor to accelerate the growth and development of the private sector along with the spillover effects to the local economy. To improve governance, several changes in organizational policies and practical strategies are introduced in many countries [19]. Previous studies have introduced four primary factors that affect and boost governance which in turn positively affect the economic and social growth of an organization. These factors involve (i) role of human capital in increasing organizational efficiency, (ii) altering or modifying the existing organizational policies, (iii) in-depth understanding of the market challenges, and (iv) ownership in determining the strengths and weakness of the organization [20]. To take these factors under consideration and their practical implementation, organizational governance is the main authority. To further validate the role of governance in bringing out increased productivity Liu et al. (2018) cited an example of the Chinese economy that has remarkably increased in the year 2018. According to Liu et al. (2018), an increased GDP implies that the Chinese private sector has greatly transformed from low income to upper-middle-income enterprises, indicating governance quality as the primary component for accelerating organizational productivity. Therefore, economists and organizational researchers agree that governance is the critical factor explaining organizational productivity. Especially, during the early stages of organizational development, governance plays an important role to sustain the organizational infrastructure on strong foundations [22].

H1: There is a significant relationship between governance and increased productivity

Management and Improved Productivity

Previous studies that assessed the impacts of management on organizational growth have witnessed management practices as mainly affecting organizational performance and productivity. Existing literature emphasizes much on raising and sustaining the firm performance through a special consideration on management [23]. Strong management ensures competitive advantage as they are the direct means through which an organization can develop, and execute non-substitutable and non-imitable human capital. Many studies also highlighted the importance of management in an organization, although every organization has its structure, design, and budget to focus on the development of management [24]. A survey conducted by Reenen and Bender (2016) also affirmed the role of management in accelerating organizational performance and productivity in Germany. Results showed that better-managed firms follow a systematic process for workforce recruitment and retaining the higher average human capital. These findings also indicated a strong significant relationship between management practices and firm-level productivity. Ngwenya and Aigbavboa (2017) also cited a relevant example to further maintain a strong link between management and increased productivity in the South

African construction sector. According to the researchers, despite managing the workforce is a little different than managing technology or workplace environment, management is the fundamental component that ensures organizational success, development, and increased output.

H2: There is a significant relationship between management and increased productivity

Leadership and Improved Productivity

Along with the major changes in the organizational trends, today we need stronger, democratic, focused, and less bureaucratic leadership. Indeed, leadership is one of the primary factors that ensure the survival and progress of an organization. The importance of leadership can be determined by a fact that it has a strong, optimistic effect on organizational productivity. Ultimately, we can find leadership as the critical factor that practically executes the organizational strategies to meet the desired goals and fulfill the objectives [27]. According to Tewari et al. (2019), this prominent relationship between leadership and increased organizational productivity is due to a psychological contract between the leaders and workforce to meet the desired organizational goals. As the more a leader shows flexibility and effectiveness in their leadership patterns, the more workforce will likely to perform accordingly. Consequently, this psychological contract will bring out positive constructive outcomes.

As noted by Madaan (2015), the purpose of choosing a leader is to affect the organizational environment and motivate the workforce for better performance. A leader has different qualities that persuade, motivate and support the workforce to perform organizational functions. Besides, leadership also contains skills and expertise that help to solve complex organizational problems, understanding a particular subject, and improving organizational productivity. Therefore, organizational productivity and success primarily depend on its leadership as leaders use different professional skills to enhance excellence and improve productivity [30, 31].

H3: There is a significant relationship between leadership and increased productivity

Organizational Strategies, Governance, Management, Leadership and Improved Productivity

According to Nenadál et al. (2018), organizations today need to focus on creating new approaches that can contribute to organizational development. These approaches should be strategic and based on both long-term and short-term benefits for all. These strategies not only ensure practical execution but also are based on increasing organizational productivity at the maximum level. Organizational strategies are one of the most enduring concerns, as they provide a direct pathway to achieve the desired organizational goals. These strategies are aimed at every aspect and every individual in an organizational hierarchical structure [33, 34].

A report represented by the United Nations Industrial Development Organization (2010) further discussed the intervening role of organizational strategies in advancing

productivity. As argued that, if the stakeholder focuses on increased productivity, they have to keep the governance, management, and leadership for designing and implementing the organizational strategies under consideration. For this purpose, annual evaluations can significantly help as organizations want both internal and external assessments. As governance considers the incremental and instrumental organizational goals, achieving these goals require a strong strategic plan. Once a plan is designed, managers ensure their practical value and further obligate the leaders to execute them. As a result, organization attains sustainable development, organizational productivity, and social-economic prosperity [35, 36]. For this purpose, Pacheco et al. (2014) highlighted some organizational strategies i.e., oriented approach for the product development, modification of existing products, improvement of bottleneck, reconsideration from the ergonomic point, and reconsidering the functions like logistic boarding, as a pathway to increase the organizational productivity. However, it is also worthwhile to notable that, these strategies are a collection of improvements aimed at the organizational workforce, organizational environment, working conditions, and decision-making that can enhance productivity by all possible means [38] (Fig. 1).

H4a: Organizational strategies mediate the relationship between governance and increased productivity

H4b: Organizational strategies mediate the relationship between management and increased productivity

H4c: Organizational strategies mediate the relationship between leadership and increased productivity

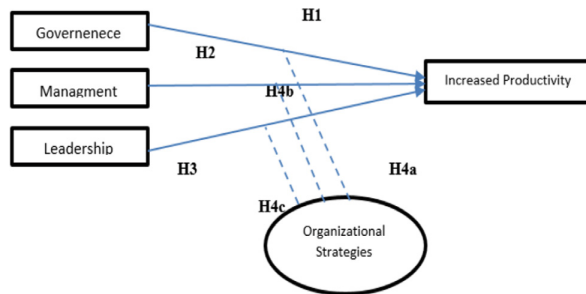


Fig. 1. Conceptual model of the study

3 Research Methods

The researcher employed the cross-sectional design in this research and used structured questionnaires with Five-point Likert scale items (Strongly disagree, disagree, neutral, agree, strongly disagree) [39–43]. However, as the study contain a self-proposed conceptual model, the researcher preferred using Structural Equation Modelling to conduct

an in-depth analysis of the proposed relationship between all the study variables. In this regard, the researcher used both Statistical Package for Social Sciences and IBM AMOS Version 23.

Moreover, to select the study sample, we used the convenience sampling technique and selected a sample of $n = 230$ individuals working in the private telecom sector in the United Arab Emirates [44]. We mainly selected the participants from the Governance, Human Resource, and workforce leaders from $n = 3$ telecom companies working in Abu Dhabi and Ajman. After data collection, we assessed the internal consistency of the research model by examining the reliability and validity as suggested by Alhumaid et al. (2021). We first examined the Construct Reliability and Convergent validity of the research model (see Table 1). We can observe that all the Cronbach Alpha values are ranging from .732 to .894. Similarly, all the Composite Reliability values are ranging from .702 to .904, indicating that all the obtained CR and CA values are successfully establishing the Construct Reliability of the research model as they are higher than the threshold value of 0.7. Moreover, regarding the Convergent Validity, we can observe that all the Factor Loading and Average Variance Extracted values (ranging from .741 to .894) are also higher than the threshold value of 0.5, indicating that Convergent Validity is also established [46, 47].

Table 1. Construct reliability and convergent validity of research model

Variables	Items	FL	AVE	CA	CR
Governance	GOV1	.985	.792	.805	.786
	GOV2	.762			
	GOV3	.629			
Management	MGT1	.643	.741	.732	.702
	MGT2	.883			
	MGT3	.700			
Leadership	LDP1	.629	.819	.728	.822
	LDP2	.942			
	LDP3	.888			
Increased productivity	IPY1	.816	.894	.761	.904
	IPY2	.976			
	IPY3	.881			
Organizational strategies	OTS1	.985	.825	.746	.825
	OTS2	.762			
	OTS3	.729			

After assessing the construct reliability and convergent validity, the researchers scrutinized the divergent validity of the research model as suggested by [1, 48, 49]. For this purpose, we used two criterion scales including Fornell-Larcker Scale and the

Heterotrait-Monotrait Ratio Scale [50, 51]. We can observe that all the square root values of Average Variance Extracted are higher than the correlation values, indicating that the discriminant validity is partially established (See Table 2). Besides, after applying the Heterotrait-Monotrait Ratio Formula, we found the HTMT value at .592, which is lower than the threshold value of 0.85, indicating that the discriminant validity is also established (Table 3).

Table 2. Fornell-Larcker scale

	GOV	MGT	LDP	IPY	OTS
GOV	.627				
MGT	.601	.549			
LDP	.521	.516	.670		
IPY	.534	.525	.497	.799	
OTS	.286	.191	.275	.472	.680

Table 3. Heterotrait-Monotrait ratio scale

	GOV	MGT	LDP	IPY	OTS
GOV					
MGT	.561				
LDP	.927	.460			
IPY	.960	.469	.919		
OTS	.217	.193	.163	.179	.279

After determining the internal consistency of the research model, the researcher conducted a descriptive analysis of the research participants. Table 4 indicates a summary of demographical data. We can see that a majority of respondents (61.7%) were males and 38.3% were females ($M = 1.39$, $SD = .488$). Furthermore, 43.9% of participants were 36 to 45 years old, 21.3% were 26 to 35 years old, 20.8% were 46 years of age or above, and only 13.9% were below 25 years of age ($M = 3.19$, $SD = 2.124$). Similarly, according to the qualification level of participants, 38.6% were having graduation degrees, 31.7% were undergraduate individuals, 25.7% of participants were holding professional diplomas or certification, and only 2.2 of respondents were having a postgraduate degree ($M = 2.33$, $SD = 2.127$). Finally, 32.6% of respondents were having work experiences of eight years or above, 27.8% were having 6 to 8 years of professional experience, 21.3% of respondents were having 2 to 5 years of experience, and 18.3% of participants were having work experience of less than one year ($M = 2.75$, $SD = 1.010$).

Table 4. Demographics of respondents

Variable	Constructs	<i>f</i>	%
Gender	Male	142	61.7%
	Female	88	38.3%
Age	Below 25 years	32	13.9%
	26–35	49	21.3%
	36–45	101	43.9%
	46 or above	48	20.8
Qualification	Undergraduate	73	31.7%
	Graduate	89	38.6%
	Post-graduation or above	5	2.2%
	Diploma/Certification	59	25.7%
Work experience	Less than 1 year	42	18.3%
	2–5 years	49	21.3%
	6–7 years	64	27.8%
	8 years or above	75	32.6%

Coefficients of Determination R² and Hypotheses Testing: Path, Mediation Analysis, Regression Analysis

The researcher examined the Coefficients of determination R² to assess the predictive value of the research model as suggested by [52]. The R² values are showing a strong predictive power as the values of latent variables are ranging from .617 to .848. Table 5 contains the summary of the relevant analysis:

Table 5. Coefficients of determination R²

Variables	R ² value
Governance	.848
Management	.617
Leadership	.712

Furthermore, the researcher conducted path and linear regression analyses to validate the proposed relationship between study variables. Table 6 summarizes the relevant results. As visible that, with the path values at .669, we found the relationship between Governance and Increased Productivity as statistically significant ($b = .927, p \geq .000$). Similarly, with the Path values at .413, we also affirm a significant relationship between Management and Increased Productivity ($b = .984, p \geq .000$). Finally, the relationship

between Leadership and Increased Productivity is also significant at the Path value of .298, indicating that the third study hypothesis is also accepted ($b = .537, p \geq .000$).

Table 6. Path analysis and linear regression analysis.

H	Relationship	Path	<i>t</i>	Sign.
H1	GOV > IPY	.669***	.265.10	.000
H2	MGT > IPY	.413**	64.17	.000
H3	LDP > IPY	.298*	123.02	.000

Similarly, the study also contains mediating effect of the Organizational Strategies on all the relationships proposed between Governance, Management, Leadership, and Increased Productivity, the research also examined the relevant mediating effect. Table 7 represents the results of the mediation analysis. We can observe that, with the significance level of $p \geq .000$ and the indirect effect value of .008, Organizational Strategies are significantly mediating the relationship between Governance and Increased Productivity. The significance level at $p \geq .000$ and indirect value of .023, Organizational Strategies are also mediating the relationship between Management and Increased Performance. Finally, the mediating role of Organizational Strategies is again validated as the significance value is $p \geq .000$ with the indirect effect value of .144 indicating a significant mediating role of Organizational Strategies in the relationship between Leadership and Increased Productivity.

Table 7. Mediation, path and regression analyses

<i>H</i>	Relationship	Path	Indirect effect	Sign.
H4a	GOV > OTS > IPY	.221, -.171***	.008	.000
H4b	MGT > OTS > IPY	.432–1.245*	.023	.058
H4c	LDP > OTS > IPY	.268–.580*	.144	.000

According to de Waal and Frijns (2016), existing literature much encourages better business opportunities for the investors in the United Arab Emirates. Both the economic and social stability of the UAE is the basic reason behind increased business opportunities in the countries. Here the role of organizational managers, governance, and other workforce members is distinguished as they are satisfied with the working conditions that practically suit them [16, 54]. This research also examined the organizational success in terms of the members that actively make workable plans and ensure their execution in the best possible manner [18]. First, we found a significant relationship between Governance and Improved Productivity in the UAE. These results show a strong consistency with the study conducted by Liu et al. (2018), as they found similar organizational excellence in Chinese organizations due to strong governance ($p \geq .000$).

Besides, the relationship between Management and Increased productivity ($p \geq .000$) is also consistent with the research carried out by Reenen and Bender (2016) as they also concluded Management is one of the fundamental agents of bringing out organizational stability and improved productivity. Thirdly, the relationship between Leadership and Improved Productivity showed significant compatibility ($p \geq .000$) with the research conducted by Tewari et al. (2019) as they found that the relationship between Management and Improved Productivity is due to a psychological contract in which, all the involved parties work on the principle of “Reward and Cost”. Lastly, the role of Organizational Strategies to Mediate the previously mentioned three relationships, is also consistent with the study conducted by Pacheco et al. (2014), as they found all the organizational members as improving productivity through introducing, designing, and implementing the Organizational Strategies. Thus, the primary goal of an organization is to unite different individuals in a group to attain mutual goals for mutual benefits. Since organizations are viewed as a system, Governance, management, and leadership are the regulating agents of the relevant system [24]. In this regard, the role of strategies is of greater significance as they help an organization to accelerate its growth, serve the interests of organizational members, reduce the risks, increasing productivity, and help an organization to achieve competitive advantages [55].

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

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An Analysis of Compensation Instruments on Employees' Job Satisfaction

The Case of Gamo Gofa Zone Trade and Industry Development Office

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Abstract. The research was conducted to examine the role of compensation on employee job satisfaction in the Gamo Gofa zone Trade and Industry Development Office. The main objective of the study was to assess the role of compensation on employee job satisfaction in the Gamo Gofa zone Trade and Industry Development Office. Identifying major problem areas and suggesting suitable solutions and recommendations improve compensation strategy.

The research used both primary and secondary sources of data to attain the above objective. The primary data was collecting questions from the employees of the organization by using questionnaires and the Secondary sources of data were textbooks, organization documents and manuals. The researcher used both closed-ended and open-ended questionnaires. The researcher used descriptive types of research design. Because it was conducted to describe the main role of compensation on employee job satisfaction in Gamo Gofa zone Trade and Industry Development Office, the target population of the study comprises the whole employees 50, as the topic indicates it is important for all levels of workers to assess their satisfaction level with compensation in their jobs. The researcher used the census sampling technique to give equal chances for all populations and make the research free from bias. Finally, the collected data was analyzed, Presented and interrelated by using statistical techniques such as tabulation and percentage then analysis, conclusion and recommendations were made.

According to the respondent compensation have so many roles such as increasing productivity, motivating employees to work and it gives high job satisfaction. The majority of the respondents indicated that they have no feeling of worthwhile and accomplishing their job as a result of the compensation system and benefit plan not based on merit (performance) base. So one can conclude that there are other methods such as seniority or experience base to compensate employees rather than performance.

Keywords: Employees' job satisfaction · Compensation strategy · Improvement

1 Introduction

There are many resources in the organization and human resources are one of the most critical resources. They all want appropriate management techniques to achieve the objective of the organization. Therefore, the organization must manage human resources effectively and efficiently to achieve its objectives. There are many methods to manage human resources such as giving better rewards to attract better employees (Gary Dessler 2003). According to R. Wayne Mondy (2010) compensation in general is the package of awards an employee receives for his/her contribution. However, many organizations neglected compensation management but it plays an important role in attracting new employees to an organization and motivating them to perform well. Compensation is a critical element of the human resource management system and should be designed to work together with another element of the system to enhance performance. Money not only helps people to attain their basic needs, but it is also instrumental in providing a higher level of need satisfaction as observed by (Dullebohn and Werling 2007). At a broad level, an organization's reward system includes anything an employee values and desires that an employer is able and would offer in exchange for employee contributions. More specifically, such compensation includes both financial and non-financial rewards. Financial rewards include direct payment such as salary plus indirect payment in the form of employee benefits. Non-financial reward includes everything in a work environment that enhances a worker's sense of self-respect and esteem by others such as a work environment that is physically, socially and mentally healthy, opportunities for training and personal development, and effective supervision recognition (F. CASCIO 2006). General effective compensation in organizations increases employee job satisfaction, productivity, and responsibilities and reduces turnover. Therefore, this paper was focus on the role of compensation on employee job satisfaction in the Gamo Gofa Zone Trade and Industry Development office in Arba Minch Cities.

In today's conservative fiscal climate incentive programs are becoming increasingly popular tools not just only to improve economic performance but also to retain valuable employees, promote on-the-job safety and encourage long-term client relationships. As a result, the most global organization understands the role of compensation (Wayne-F-Casio 2006). Commonly, the employee often seeks different benefits to be more productive and achievable organizational objectives, Compensation is any financial and non-financial benefit that can be given to employees as a reward to motivate them to be more productive and recognize their contribution forwards the organization's goal achievement and Compensation is a vital tool in helping to encourage employees to be able to work. It is acceptable that in different organizations as well Compensation plays an important role in increasing satisfaction to employees. The organization's objectives can't be achieved without satisfied employees but, most organizations in Ethiopia have little understanding of the role of compensation in employee job satisfaction. As a result, many employees are changing their organization to get attractive compensation. Among this Gamo Gofa zone, the Trade and Industry Development Office In Arba Minch is the one who has a lack of awareness of the main roles of compensation on employee job satisfaction and little understanding of organizational objectives can't be achieved without satisfied employees. So, the researcher in this paper focus to investigate compensation which is the best means of creating awareness about the advantage of compensation and

employee satisfaction towards their jobs it also tries to identify the effect of compensation on the employee's job satisfaction and creating awareness about the advantage of compensation in a case of Gamo Gofa zone Trade and Industry Development Office in Arba Minch City.

From the above description of the problem, the following leading questions were raised in the research.

1. How Gamo Gofa Zone Trade and Industry Development office compensate their employees?
2. Are the employees satisfied or not with the existing compensation system?
3. What are the influences of compensation in the organization?
4. Does the organization encourage the compensation strategy?

Objectives of the Study

The general objective of the study was to know the role of compensation on employees' job satisfaction in the case of the Gamo Gofa Zone Trade and Industry Development Office.

Specific Objectives

- To assess how Gamo Gofa zone Trade and Industry Development Office compensate their employees.
- To find out whether the employees are satisfied or not with existing compensation
- To examine the impact of compensation in the organization.
- To know whether the organization encourages the compensation strategy

2 Research Methodology

2.1 Research Design

The researcher used descriptive types of research design. The study would focus on the role of compensation on employees' job satisfaction. It was conducted for the purpose of understanding the main role of compensation on employees' job satisfaction in Gamo Gofa Zone Trade and Industry Development Office.

2.2 Target Population, Sample Size and Sampling Technique

The target population of the study comprises the whole employees of the organization. The topic of this study was the role of compensation on employee's job satisfaction. So it is important for all levels of workers to assess their satisfaction levels with compensation in their jobs. Among the whole population of 50, the researcher would select 40 as sample. The researcher used censes sampling techniques. This is because of giving equal chance for all population and makes the research free from bias.

Data Source and Collection Methods.

The researcher was used both primary and secondary data to conduct this research. The primary data was collected from the employees of the organization through questionnaires and secondary data was obtained from textbooks, organization documents and manuals. The researcher used both closed ended and open ended questionnaires.

Data Analysis and Interpretation.

The collected data was analyzed and interpreted through qualitative and quantitative by using table and percentage.

2.3 Data Presentation, Analysis and Interpretation

This chapter deals with the result obtained from questioner filled by employees Gamo Gofa zone Trade and Industry Development Office. In order to conduct these research 50 questionnaires were distributed to employees of Gamo Gofa zone Trade and Industry Development Office and 40 copies were properly completed and returned by employees. The rest of 10 questioners were not return because of various reasons such as employees have shortage of time and lack of sufficient ideas did not fill up and returned the questionnaire on time. For simplicity and convenience, the gathered data were analyzed using table and percentage.

2.4 Demographic Characteristics of Respondents

Before going to see the necessary part of the study, it would be appropriate to know the respondents general background information or demographic details. It contains respondents Sex, age and educational background.

Table 1. Respondent's profile

No	Items	Alternatives	Respondents	
			Number	Percentage
1	Sex	Male	24	60%
		Female	16	40%
		Total	40	100%
2	Age	20–30	14	35%
		31–40	16	40%
		41–50	10	25%
		>50	0	–
		Total	40	100%
3	Educational back ground	Diploma	10	25%
		Degree and above	30	75%
		Total	40	100%

Source: questionnaire 2021

As Table 1 shows regarding gender issue 24(60%) are males and 16(40%) are females. This shows most of the employees in Gamo Gofa Trade and Industry Development Office are males.

Concerning the age ranges of the respondent in the organization are relatively longer number 16(40%) of them are between 31–40 years where as 14(35%) of them are between 20–30 the rest of 10(25%) of from between 41–50 age groups. so one can conclude that majority of the employees are between 31–40 years this means that are in middle age or productive when consider the educational states of the respondent the granter percentage 30(35%) show that they are degree and above holders, 10(25%) are having college diploma from this, the researcher can conclude majority of employees have degree and above this enables, the researcher to get enough and accurate information.

2.5 Respondents Reaction on Role of Compensation

Pay plans are typically used to energize direct or control employee’s behavior (Robert con 1002). Respondents were asked to evaluate the main role of compensation on their job satisfaction in Gamo Gofa zone Trade and Industry Development Office.

Table 2. Working in other organization before

Items	Alternatives	Respondents	
		Number	Percentage
Have you ever been employees in other organization before?	Yes	30	75%
	No	10	25%
	Total	40	100%

Source: questionnaire 2021

As Table 2 among the respondents of 30(75%) are employed in other organization before one the rest of 10(25%) are not employed.

From this it is possible to conclude that the majority of employees in Gamo Gofa zone Trade and Industry Development Office are employed in other organization before, this means the organization have enough experienced employee.

Table 3. Causes of leaving ex-organization

No	Items	Alternative									
		Very high		High		Medium		Low		Very low	
		No	%	No	%	no	%	no	%	no	%
1	Salary	0	–	11	36.7	14	46.7	5	16.7	0	–

(continued)

Table 3. (continued)

No	Items	Alternative									
		Very high		High		Medium		Low		Very low	
		No	%	No	%	no	%	no	%	no	%
2	Fringe benefit	2	6.25	8	26.7	15	50	4	13.3	1	3.3
3	Job satisfaction	3	10	5	16.7	11	36.7	11	36.7	0	–
4	Growth opportunities	0	–	5	16.7	12	40	12	40	1	3.3
5	Learning opportunities	2	6.7	2	6.7	12	40	11	36.7	3	10

Source: questionnaire 2021

As shown in the above Table 3 item 1, 11(36.7%), 14(46.7%), 5(16.7%) are of the respondent replica that the salary they have got from the organization is high, medium and low respectively, the salary gains very high and very low is not respondent A major of employee's salary in ex-organization is medium, one can conclude salary is cause of leaving organization.

From the above Table 3, item 2, 2(6.25%) 8(26.7%) 15(50%), 4(13.3%) and 1(3.3%) of the respondent said that fringe benefits that they have got from ex-organization is very high, high, medium, low and very low respectively. So the researcher easy can conclude fringe benefit is not a cause of leaving one organization.

In the case of job satisfaction or item 3, 3(10%), 5(16.7%), 11(36.7%), 11(36.7%) and the rest very low is none of the respondent replied that their job satisfaction in ex-organization, very high, high, medium. Low respectively. So one can conclude that most of the employee's job satisfaction is very low with ex-organization, this means less job satisfaction cause for leaving the organization.

The researcher can consider the growth opportunities or item 4, very high is non 5(16.7%), 12(40%), 12(40%) and 1(3.3%) of the respondent said that the growth opportunities that they have is very high, high, medium, low and very low respectively. There for the researcher can conclude that is very less growing opportunities in ex-organization may cause easy to leave one organization.

In item 5 the case of learning opportunities item 5 2(6.7%), 2(6.7%), 12(40%), 11(36.7%), 3(10%) are said very high, low and very low respectively. So the researcher can conclude there is a very low learning opportunities given to employees in ex-organization, so employees leave from the organization to get learning opportunities.

Table 4. Role of compensation on job satisfaction

No	Items	Alternatives	Respondents	
			Number	%
1	Do you think that compensation has an impact on employee’s job satisfaction?	Yes	35	87.5%
		No	5	12.5%
		Total	40	100%
2	Are you satisfied with your job?	Yes	31	77.5%
		No	9	22.5%
		Total	40	100%
3	Do you get a feeling of while and accomplish high your job well, as result of compensation system provided to you?	Yes	29	72.5%
		No	11	27.5%
		Total	40	100%

Source: questionnaire 2021

From the above Table 4, item 1, 35 (87.5%) of respondents replied that compensation has its own impact on employee’s job satisfaction and the rest of 5(12.5%) said compensation has no impact on employee’s job satisfaction. There for the researcher concludes that compensation has its own impact on employee’s job satisfaction.

In item 2, 31(77.5%) of respondents are satisfied with their job and 9(22.5%) are not satisfied with their job. So one can conclude that majority of the employee in Gamo Gofa zone Trade and Industry Development Office are not satisfied with their job.

Finally, in item 3, 29(72.5%)of respondents have a feeling of worthwhile and accomplishing their job well, as result of compensation system provided to them and 11(27.5%) have not a feeling of worthwhile and accomplishing their job as result of compensation system provided to them, one can understand compensation system provide a feeling of worth for employees.

Table 5. Level of satisfaction on the job

Items	Alternatives	Respondents	
		Number	Percentage
Rate levels of your job satisfaction	Very high	2	6.4%
	High	20	64.5%
	Medium	8	25.8%
	Low	1	3.2%
	Very low	0	0
	Total	19	100%

Source: questionnaire 2021

As Table 5, show regarding level of satisfaction on the job. 2(6.4%), 20(64.5%), 8(25.8)and 1(3.2%)respondent said very high, high, medium and low respectively and no one can replied very low. So the researcher can easy conclude the job satisfaction of the employees is high in Gamo Gofa zone Trade Industry Development Office.

Table 6. Existence of attractive compensation strategy

No	Items	Alternative	Respondents	
			Number	Percentage
1	Do you believe that compensation strategy encourage employees to work hard?	Yes	36	90%
		No	4	10%
		Total	40	100%
2	Do you believe that you organization compensate employees based on merit (performances)to motivate hard work	Yes	16	40%
		No	24	60%
		Total	40	100%

Source: questionnaire 2021

From the above Table 6, item 1 out of 40 total respondent 36 (90%) have said compensation strategy encourage employees to work hard and 4(10%) replied compensation strategy cannot encourage employees to work hard. So one can conclude easily compensation strategy encourage employees to work hard.

In item 2, 16(40%) of respondents believe that their organization compensate employees based on merit to motivate hard work and 24(60%) respondent said our organization cannot compensate employees based on performances to motivate hard work. From this the researcher can conclude the organization have another alternative system to compensate employees rather than performance base like Experience and seniority.

Table 7. Advantages of compensation

No.	Items	Alternative	Respondents	
			Number	Percentage
1	What is the advantage of compensation to employees?	Productivity increase	16	40%
		Increase job satisfaction	24	60%
		Total	40	100%
2	How day rate the level of employee's retention as a result of equitable compensation system?	Very high	3	7.5%
		High	21	52.5%
		Medium	16	40%

(continued)

Table 7. (continued)

No.	Items	Alternative	Respondents	
			Number	Percentage
		Low	0	0
		Very low	0	0
		Total	40	100%

Source: questionnaire 2021

As we can see from the above Table 7 item 1, 16(40%) of respondent said advantage of compensation is to increase productivity. 24(60%) replied it increases employee job satisfaction. There for one can clearly understand compensation have so many advantages to employees.

In item 2 out of 40 total respondents 3(7.5%), 21(52.5%) and 16(40%) of respondent replied that the level of employees’ retention as a result of equitable compensation system is very high, high and medium respectively and no one can have said low and very low. From this the researcher concludes the level of employee’s retention as a result of equitable compensation system is very high.

Table 8. Disadvantages of lack of fair and equitable compensation

Alternative	Respondents	
	Number	Percentage
Turn over increase	5	12.5%
Responsibility	9	22.5%
Productivity	3	7.5%
All	23	57.5%
Other	0	0
Total	40	100%

Source: questionnaire 2021

Table 8 shows that 5(12.5%) of respondent said disadvantage of compensation is increasing of turnover in the organization. 9(22.5%) replied responsibility decrease, 3(7.5%) said productivity decrease and the rest of 23(57.5) said all are the disadvantages of lack of fair and equitable compensation. So from this one can clearly understand all the above factors are the disadvantages of lack of fair and equitable compensation.

Results of open ended questions analysis

There are open ended questions prepared to the respondents which are about the roles of compensation, their feeling to accomplishing the job and does the organization compensate employees based on merit (performance).

Roles of compensation on job satisfaction; According to the respondent's compensation have so many roles such as increase the productivity, motivate employees to work and it gives high job satisfaction.

Respondents feeling regarding to compensation system

Majority of the respondents indicated that they have no a feeling of worthwhile and accomplishing their job as a result of compensation system and benefit plan not based on merit (performance) base. So one can conclude that there is another method such as seniority or experience base to compensate employees rather performance.

3 Result Analysis

This topic deals with the summary of what has been done in the research process and point out the summary of the finding.

- Most of the employees of the organization are males and they are between the 31–40 age group. Most of them also with education background of degree and above; that means they have young, productive and professional.
- Some employees 10(25%) have been employed in other organizations before and they can leave the organization due to some reasons such as less satisfaction with salary, fringe benefits, growth opportunities, leaving opportunities and having less job satisfaction.
- The compensation strategy encourages employees to work hard and it has its advantage and disadvantage to the employees as well as to the organization.
- According to the respondent major 24(60%) repined advantage of compensation increased job satisfaction among employees, it gives employees become honest and accountable.
- Majority 23(57.5%) of the respondent replied compensation has its disadvantage when it can provide to employees, such as a turnover increase, responsibility decrease and also productivity of the organization decrease.
- Most of the respondents 24(60%) said the organization cannot compensate employees based on merit (performance) base and most employees disagree with such a compensation system.
- In the organization, most of the respondents 29(72.5%) have a feeling of worthwhile and accomplishing their job well due to sufficient compensation and benefits.
- Majority of the respondent 21(52.5%) replied when compensation is given to employees the rate of retention of employees is high and it has so many roles, such -- as the organization getting a competitive advantage, attracting the best employees, retaining good employees and make employees strong work ethics and good character.

As the majority of respondents, 23(57.5%) said compensation has over negative impart when it cannot fairly provide or given to employees such as significant employees leaving the organization. no sense of loyalty and accountability dissatisfaction with their job and also productivity of the organization decrease.

4 Conclusions

This study has attempted to investigate the role of compensation on employee job satisfaction in the Gamo Gofa zone Trade and Industry Development Office. The researcher wants to put the conclusion of this particular study forward to the readers as follows.

- Concerning this study, the compensation strategy encourages employees to work hard and it has its advantage and disadvantage for the employees as well as the organization.
- According to, the employee's response fair and equitable compensations can provide employees job satisfaction, increase organisational productivity and decrease turnover in the organization. Generally, a fair and equitable compensation system plays a key role in the organization.
- According to, employee response causes of leaving one organization are less in salary, fringe benefit, job satisfaction, growth opportunities and learning opportunities. In generally financial as well as non-financial rewards are the cause of leaving employees.
- Concerning merit or performance base of compensation respondents disagreed because organizations can not compensate employees based on performance.
- According to this study lack of fair and equitable compensation harms the organization such as increased turn over; employees cannot have a sense of loyalty and accountability and decrease organization productivity.

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The Mediating Role of Psychological Capital Resources Between Grit and Graduate Employability

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Abstract. This paper seeks to determine the influence of grit on graduate employability (GE) and aims to extend past studies by introducing psychological capital (PsyCap) resources (i.e., hope, self-efficacy, resilience, optimism) as the mediators between grit-GE relationship. This study employed a cross-sectional approach; whereby online questionnaires were distributed to graduates registered under Job-Centre Brunei (JCB). Three hundred and three respondents were analyzed using a partial least square-structural equation model (PLS-SEM). The findings suggest gritty graduates are more likely to possess higher GE. Furthermore, hope was found to mediate the relationship between grit and GE. The results obtained in this study suggests the acquisition of personal resources such as grit and hope could increase chances of graduate employment. Consequently, GE stakeholders can work together to inculcate these personal resources within graduates.

Keywords: Grit · Psychological capital · Graduate employability

1 Introduction

The nature of employment has been one of the fastest-growing global phenomena ever witnessed, owing mainly to increased globalization, rapid technological advancement, and 4.0 industrial revolution (Herbert et al. 2020). These challenging circumstances accentuate the need for employees to maintain their employability to retain their positions. Similarly, individuals who wish to enter the labor market, such as fresh graduates, must ensure they are equipped with versatile employability credentials to attract employers. Graduate employability (GE) refers to “a set of achievements such as skills, understandings, and personal attribute that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community, and the economy” (Yorke and Knight 2006, p.3). As result of massification of higher education institutions (HEIs), high graduate unemployment, competitive labor market, and skill mismatch, GE has sparked significant interest among policymakers, HEIs, employers, and graduates alike. In Brunei, GE is regarded as the top national agenda to achieve the national development plan, National Vision 2035, aiming to produce highly qualified and skilled Bruneians by 2035. However, adversities faced

by the country today (i.e., high unemployment rate) may hinder such aspiring goals as it limits the young generation to contribute back to the sultanate. With increasing interest in importance of personal attributes on GE, there is evidence supporting grit as a predictor of GE (Hora et al. 2020); Widodo and Chandrawaty (Widodo et al. 2020). Furthermore, little is known about the intervening mechanism that contributes to grit-GE relationship. Psychological capital (PsyCap) resources are proposed as mediators. Even though prior research has employed PsyCap as a mediator, none has been examined between grit and GE. Henceforth, this study aims to contribute to the existing literature by investigating the underlying mechanism between grit and GE.

2 Theory and Hypotheses

2.1 Grit and GE

Duckworth and colleagues popularized grit as “passion and perseverance for long-term goals”. Albeit grit possesses a stable trait-like characteristic, it can still be developed from polishing one’s skills, having the right mindsets, and being in an encouraging setting (Duckworth 2016). Recent interest has contributed to a significant increase in grit literature – including its antecedents and outcomes. Thus far, grit has been associated with positive outcomes such as academic achievement (Bowman et al. 2015) and remain employed (Eskrels-Winkler et al. 2014), among others. Collectively, these studies support that being gritty is crucial for individuals to pursue goals that require one to have long-term perseverance and passion in accomplishing the intended goal. Especially in today’s unpredictable labor market, one needs to be consistent and persevere through hardships – being gritty will enable graduates to accomplish more remarkable achievements than others of similar intelligence (Chen et al. 2018). However, current evidence that associates grit and employability remain limited. For instance, study by Kasler et al. 2017 demonstrated grit to influence employability. Based on the studies above, it could be postulated that grit may positively influence GE. According to Schimschal et al. 2020, grit acts as a ‘psychological driver’ that navigate individuals to the path of success.

Human capital theory (HCT) posits the accumulation of assets (i.e. knowledge, personality attributes, social) that enable individuals to perform labor and consequently produce economic value (Becker 1964). Excellent discipline proficiency, exemplary practical skills, and desirable personalities are some of the assets that would increase graduates’ attractiveness in the labor market, subsequently enhancing their chances of landing a job. This study specifically focuses on acquisition of grit – being able to put consistent effort and being perseverance may allow individuals to gain success. Drawing from HCT, acquisition of competencies including grit within graduates is more likely to increase employability and increase the probability of performing labor. Based on the discussion above, the following is put forward:

Hypothesis 1: Grit is positively related to GE.

2.2 The Mediating Role of PsyCap Resources

PsyCap is a higher-order positive psychological construct consisting of hope, self-efficacy, resilience, and optimism. PsyCap as the first-order construct is empirically proven to have conceptual distinctions as each resource possess unique characteristics (Luthans et al. 2007). Since most PsyCap studies focused on understanding this construct as a higher-order, this study aims to fill the gap by considering PsyCap as a first-order construct. Consistent with positive organizational behavior (POB) criteria, PsyCap is a state-like resource, which means that although this resource is relatively stable, it is malleable and open to development through training interventions (Luthans and Youssef-Morgan 2017).

Hope refers to “a positive motivational state that is based on an interactively derived sense of successful (a) agency (goal-oriented energy) and (b) pathways (planning to meet goals)” (p. 287) (Snyder et al. 1991). Agency and pathways are the fundamental elements of hope that operate in interlocking mechanism that helps individuals achieve their goals. Previous studies provided compelling evidence on the positive impact of hope on various life contexts such as academic outcomes (Day et al. 2010), workplace satisfaction (Wandeler and Bundick 2011) and employability (Bakari and Khoso 2017). The second dimension of PsyCap is self-efficacy, coined by Luthans 2002 as “an individual’s conviction or confidence about his or her abilities to mobilize the motivation, cognitive resources and courses of action needed to successfully execute a specific task within a given context” (p. 669). Bandura 1995 asserts that even though self-efficacy belief may be questionable, it influences an individual’s thinking and feeling, which consequently motivate one to act based on their efficacy beliefs. Several studies on self-efficacy have identified its influence on diverse domains, including academic performance and achievement (Honicke and Broadbent 2016) and employability satisfaction (Austin and Cilliers 2011).

Resilience is “positive psychological capacity to rebound, to ‘bounce back’ from adversity, uncertainty, conflict, failure, or even positive change, progress and increased responsibility” (Luthans 2002, p. 702). In facing adversities, resilient individuals can better cope as they have emotional stability and flexibility in managing changes and new experiences (Bonanno 2004). Rich empirical evidence has demonstrated the link between resilience and various life domains – higher GPA scores (Scales et al. 2006), greater job satisfaction (Luthans et al. 2015) and higher perceived employability (Avey et al. 2008). Optimism has two complementary streams accepted in POB: attribution theory (Seligman 1998) and expectancy theory (Carver and Scheiver 2002). Drawing from attribution theory, optimism views positive events as internal, stable, and general, while negative events are rather external, unstable, and specific (Luthans and Youssef-Morgan 2017). Meanwhile, optimism from the prospect of expectancy theory is about the expectation of desired outcome due to increased effort. Past studies have also demonstrated the positive influence of optimism on academic achievement (Solberg et al. 2009). Highly optimist individuals are also more likely to pursue goals (Carver and Scheier 2014) and high persistence even at the most challenging tasks (Nes et al. 2005).

Pham et al. 2019 asserted the importance of PsyCap for graduates due to fierce competition among job seekers and instability of current labor market disposition. Recalling from HCT, accumulation of personality attributes would enhance individuals’ likelihood

of undertaking paid employment. Grit has a trait-like characteristic that is a relatively fixed personality, which explains why this construct has been attributed to attaining long-time achievements (e.g., getting a job). Conversely, PsyCap characteristics are malleable and open to development, therefore more effective to unlock daily goals. With the ever-competitive labor market witness today, there is no doubt that graduates have to go through series of challenges and even setbacks. The process of job hunting is lengthy and unpredictable, it requires one to have a stable personality such as grit to ensure one remain on a long journey – which acts as a ‘stabilizer’ to the malleable PsyCap resources. Drawing on HCT, combination of personal attributes (i.e., grit and PsyCap resources) is proposed to act as ‘differentiating competency’ among other prerequisite competencies, enabling graduates to hold an advantage over other graduates. Based on these discussions, the following are hypothesized:

Hypothesis 2: Hope mediate the relationship between grit and GE.

Hypothesis 3: Self-efficacy mediate the relationship between grit and GE.

Hypothesis 4: Resilience mediate the relationship between grit and GE.

Hypothesis 5: Optimism mediate the relationship between grit and GE.

3 Method

GE was measured using scale by Rothwell et al. 2008, of which only ten items were used in this study. Hope was measured using a 6-item State Hope Scale (Snyder et al. 1996). 10-item General self-efficacy scale (Schwarzer and Jerusalem 1995) was used to measure self-efficacy. Resilience was measured using Brief Resilience scale (Smith et al. 2008) that consist of 6-item. Optimism was measured using 4 items from the Life Orientation Test scale (Scheier and Carver 1985). Lastly, grit was measured using the Short Grit Scale (Duckworth et al. 2007) that consist of 8-item. Respondents were provided with a 5-point Likert scale to rate all questions provided, with 1 *asnot like me at all* to 5 as *very much like me*. The data is obtained through online questionnaire distributed to graduates that are registered under JCB, a government-based career center. The online survey was distributed to 500 registered jobseekers, out of which only 303 responses was useable for this study. The mean age of the respondents was 27.2 years old ($SD = 3.0$, range 20 – 37 years old). Out of 303 respondents, 202 were female, and 101 were male. The majority of the respondents obtained an undergraduate degree (74.6%), while the rest hold a postgraduate degree (25.4%).

4 Data Analysis and Results

The research model was analyzed using PLS-SEM technique and employed the two-stage process as part of data analysis that assesses the measurement model and structural model. The software used to perform PLS-SEM analysis is SmartPLS version 3.3.3 (Ringle et al. 2015). The measurement model’s assessment includes item reliability, internal consistency reliability, convergent validity, and discriminant validity. Hair et al. (2014) suggested that item loadings below 0.40 should be deleted for item reliability. Out of 42 items, 31 items were retained as they possess loadings of 0.40 and above.

Following the conservative threshold set by Hair et al. 2017, the constructs’ internal consistency reliability is achieved since values for composite reliability were greater than 0.70. Meanwhile, convergent validity was evaluated using average variance extracted (AVE). Findings found AVE values for every variable are above the threshold of 0.50 (Urbach and Ahlemann 2010), indicating that the convergent validity is achieved. Lastly, an assessment of discriminant validity was performed using Fornell-Larcker and HTMT criterion. Using Fornell-Larcker test, the constructs were acknowledged to possess discriminant validity as the correlation among constructs has smaller values than the square root of the construct’s AVE. Meanwhile, following the HTMT criterion, the constructs were also proven to be empirically distinct as the values are below the threshold value of 0.85 (Kline 2015).

An additional test was performed before assessing the structural model, a multi-collinearity test using variance inflation factors (VIF). In this study, all the VIF values were lower than the conservative threshold of 3 (Hair et al. 2010), denoting the absence of collinearity in the current model. Henceforth, it is expected that the findings of path analysis would produce unbiased results about the test performed. In hypothesis testing, the structural model was examined by employing bootstrapping method at 5,000 subsamples. As displayed in Table 1, the result revealed a significant total effect ($c = 0.24^{***}$) for the relationship between grit and GE, after controlling for gender, age and education. Furthermore, after including PsyCap resources as mediators, the direct effect of the grit-GE relationship is still significant. However, it has slightly decreased ($c' = 0.23^{***}$), which suggests intervening effects. Nonetheless, these findings yield support for hypothesis 1.

As suggested by Hayes 2009, the main requirement in assessing mediating effect is by testing the ‘ $a \times b$ ’ significance – path coefficient (β) product of the independent variable to mediating variable and mediating variable to the dependent variable. The indirect effect between grit and GE through hope ($a_1 \times b_1$) was found to be significant ($\beta = 0.20, t = 5.46, CI = [0.14; 0.28]$). Meanwhile, the indirect effect of self-efficacy between grit and GE ($a_2 \times b_2$) was not significant ($\beta = 0.01, t = 0.30, CI = [-0.08; 0.11]$). Additionally, the indirect effect of resilience on grit-GE relationship ($a_3 \times b_3$) was not significant ($\beta = -0.01, t = 0.34, CI = [-0.09; 0.06]$). Lastly, the indirect relationship between grit and GE through optimism ($a_4 \times b_4$) was not significant ($\beta = 0.01, t = 0.27, CI = [-0.06; 0.08]$).

Table1. Results of structural model

	Total effect on GE (Model 1)				Direct effects on GE (Model 2)				The indirect effect on GE (Model 2)					
	Path	t	95% CI		Path	t	95% CI		Point estimate	t	95% CI			
			Lower	Upper			Lower	Upper			Lower	Upper		
Grit (c)	0.24	4.95	0.18	0.34	H1: GT->GE	0.23	4.15	0.13	0.34	H2: GT->HP->GE	0.2	5.46	0.14	0.28
Control variables														
Gender	-0.08	1.34	-0.19	0.02	Gender	0.04	0.66	-0.07	0.14	H3: GT->SE->GE	0.01	0.3	-0.08	0.11
Age	0.01	0.1	-0.11	0.12	Age	0	0.08	-0.12	0.11	H4: GT->RS->GE	-0.01	0.34	-0.09	0.06
Education	-0.13	2.13	-0.24	-0.03	Education	-0.07	1.26	-0.17	0.04	H5: GT->OP->GE	0.01	0.27	-0.06	0.08

Notes: GT: grit; HP: hope; SE: self-efficacy; RS: resilience; OP: optimism; GE: graduate employability. BCCI: bias-corrected confidence interval. Bootstrapping based on n = 5000 subsamples.

5 Discussion

To date, very little was found in the literature on effect of grit on GE, which this study aims to fill the empirical gap. Similar to previous study that assessed grit-employability relationship (Kasler et al. 2017), current study found grit to have a significant positive relationship with GE. These results add to growing body on the importance of evidence trait-like personality acquisition, such that grit acts as a catalyst that boosts graduates' chances of employment. Given the challenging labor market environment faced globally, graduates who can persevere through setbacks while maintaining consistent effort are likely to receive fruitful outcomes due to their tenacity and determination. Consistent with Duckworth 2016, although grit possesses stable feature, this trait can be developed by being in an encouraging environment – which Bruneian graduates are equipped with, as both government and industry are continuously working closely and actively to ensure graduates are ready for the job.

The current study also extends previous studies by exploring the intervening effect of PsyCap resources between the grit-GE relationship. This study found hope to mediate the grit-GE relationship, thereby providing new insights into the literature. This interaction may be explained using the 'trait-state continuum' conceptualized by Youssef and Luthans 2007 on the malleability of various psychological resources in POB. PsyCap resources possess a state-like resource that is malleable and open to development, while grit is a trait-like resource that is relatively fixed and not very malleable (Luthans and Youssef-Morgan 2017). Subsequently, these personality resources have 'joint effects' - hope can be adaptable and molded according to corresponding changes. At the same time, grit acts as a strong foundation that allows graduates to endure and remain consistent even when beset with adversities. For instance, hopeful graduates are more likely to persevere through challenges since they know how to strategically utilize their capabilities depending on the situation that they are facing. In addition, hopeful graduates leverage their capabilities by effectively portraying their skills and know-how according to the current market demand.

6 Conclusion and Recommendations

The results obtained in this study have several implications for theory and practice. The present findings support extant empirical studies that have established a link between grit and GE. This study also contributes to HCT as the findings suggest that acquisition of personality attributes (i.e., grit, hope) increase chances of getting economic return through increased employability. These findings contribute to the expansion of employability literature by emphasizing the importance of personal resources as one of key influencers of GE. Consistent with HCT, integration of competencies is more likely to increase employment and increase investment return in education. This finding also presents contributions to a relatively new construct such as grit; as per the author's knowledge, only a few studies have attempted to investigate grit and GE. The main practical implication is increasing knowledge and awareness on approaches that can help graduates increase their employability. Given Brunei current labor situation, graduates actively looking for a job need to instill substantial PsyCap resources to persist

through and achieve their goals. Since PsyCap is malleable and open to development, GE stakeholders can work together to develop and inculcate PsyCap within graduates.

The study has its limitations which subsequently allow the area of improvements for future research. First, our study is limited by a relatively small sample of 303 graduates in Brunei; hence, the findings may not be generalized across other contexts. Therefore, future research is suggested to increase the sample size to allow broader generalization. Another limiting constraint of our study involves using self-report measures, which posits possibility of social desirability bias and common method variance (Podsakoff et al. 2003). Therefore, other studies may mitigate this limitation by employing non-self-report measures and collecting data from various stakeholder perspectives (i.e., HEIs, employers). Finally, another limitation worth noting is the cross-sectional design of this study, which restricts the causal effect of the relationship. Henceforth, the future study may adopt a longitudinal study approach to examine the causal relationship between grit and GE.

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The Impact of Working-Life Quality on UCAS Workers' Performance

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Abstract. The study aims at identifying the level of working-life quality and its impact on the workers' performance at the University College of Applied Science in Gaza, Palestine. UCAS. The descriptive analytical approach was followed, and for the data collection, a questionnaire, designed by the study, was used on a sample of 330 employees. The results showed that there is a statistically significant impact of working-life quality on the workers' performance, as the main influential factors are salaries and promotions, job stability and security, involvement in decision-making, and career advancement. The study recommends providing financial resources to enable UCAS to pay its financial liabilities to the employees, besides increasing and promoting social visits among the employees. Also, it is recommended that UCAS involve employees in the decision-making process, as well as improve its promotion system to allow more potential to be explored.

Keywords: Working life quality · Employees' performance · The University College of Applied Sciences (UCAS)

1 Introduction

The working-life Quality is essential to management and has acquired a high position among studies in human resources, organizational behavior, and general administration. It consists of a group of major elements that influence the performance of any institution. Such a concept affects employees' personal life as well because employees are human beings with emotions and have diverse personal interests. If such emotions and personal interests are not considered, the employees' performance would be directly influenced, hence influencing the performance and production of the institutions they work at (Silenti et al. 2018; Palestinian Society 2020).

The working-life quality describes the environment where a certain job is carried out, and where all human needs and requirements are excellently met. If so, the employees' performance would be positively affected. This contributes to ensuring occupational satisfaction and job security, so the employees exert all possible efforts to achieve the objectives of the institution and improve its performance (Barbari 2016).

Educational institutions generally depend on their qualified and distinguished staff to achieve success, and on their ability to adapt to changes in the working environment. Providing a good working environment is a key factor in attracting employees who can

do their jobs efficiently, and in improving their level of satisfaction which would improve their performance. As a result, these institutions would win a sustainable competitive advantage within a highly competitive market. The continuous development in working environments urges educational institutions to improve their internal environment to increase their organizational efficiency so as to follow up with such rapid changes (Barbari 2016). Previous studies showed that working-life quality is linked to occupational performance (Al-Dahdouh 2015), limiting burnout (Barbari 2016) and work ethics (Shanti 2016).

Palestinian universities play a major role in investing and developing physical, human and financial resources in Palestine, as they are the cornerstone of economic and social development. The University College of Applied Sciences (UCAS), among these universities and a part of this society, provides its services to students, institutions, and society as a whole. Therefore, it requires the availability of qualified manpower. To achieve their purposes, all universities, including UCAS, focus on the quality of employees' working life and the development of their performance on the level of academic, administrative, and service staff, to and enables the development of their performance and behaviors.

Since UCAS is a pioneering academic institution that seeks to provide and improve educational services using the most recent and advanced devices, labs and curricula to serve thousands of students, researchers and others interested from all governorates across the Gaza Strip, the current investigation examined the level of working-life quality at UCAS and its impact on workers' performance, which study. The following parts of the article present the theoretical framework, methodology, results and discussion, and finally the recommendations and suggestions for further study.

2 Theoretical Framework

2.1 Working Life Quality

The term working-life quality is a continuous, previously-planned process that aims to balance the requirements of working and personal life of employees through justice and organizational efficiency, achievement of job security and equality in paying salaries and incentives, promotions based on efficiency, social integration at work, securing good and safe working conditions, providing suitable organizational environment through engagement in decision making to achieve better results and reach advanced levels. All of these matters would make employees feel satisfied and secure, so they would exert more effort to help the company where they work to develop and achieve more success. Shortly stated, the extent to which the employees are satisfied with the institution's moral and physical working environment is important.

The literature cites the early seventies as the beginning of showing interest in working-life quality. Lots of study studies were conducted tackling the different aspects of working-life quality, and several administrations started improving their production and working productivity by examining organizational influences on the working-life quality (Biyari 2016). In brief, working-life quality can be defined as workers' expectations about the institution's ability to achieve equality, quality, payment of salaries

and compensations, provision of a healthy and suitable working environment, development of human resources, achievement of job security and stability, and achievement of balance between work and personal life (Biyari 2016).

2.2 Workers' Performance

The performance of workers refers to the total work of any institution which the worker does whether in the fields of commerce, industry, or services. It is the entire system resulting from the institution's interaction with internal and external factors. Workers' performance is defined as the total outcome of organizational behavior that is linked to the optimal utilization of the company's resources in the accomplishment of tasks and activities, commitment and loyalty to the company and provision of services to clients (Ayed and Al-Shamsi 2013; Saleh 2018). The level of workers' performance helps in the assessment and evaluation of the efficiency of the plans, strategies, desired goals, productivity and organizational efficiency (Darwish 2018).

In light of the above explanation and definitions of the working-life quality and the worker's performance, the following hypotheses were formulated:

- There is a statistically significant relation at $\alpha < 0.05$ between the working-life quality (salaries and bonuses, social relations, job security and stability, involvement in decision-making, promotions and career advancement, and physical working conditions) and workers' performance.
- There is a statistically significant impact of the working life quality on the workers' performance at $\alpha < 0.05$.

With reference to the above-mentioned hypotheses, the following model, shown in Fig. 1, was suggested and followed. The model highlights the study variables i.e. the independent with its dimensions and the dependent variable with its dimensions.

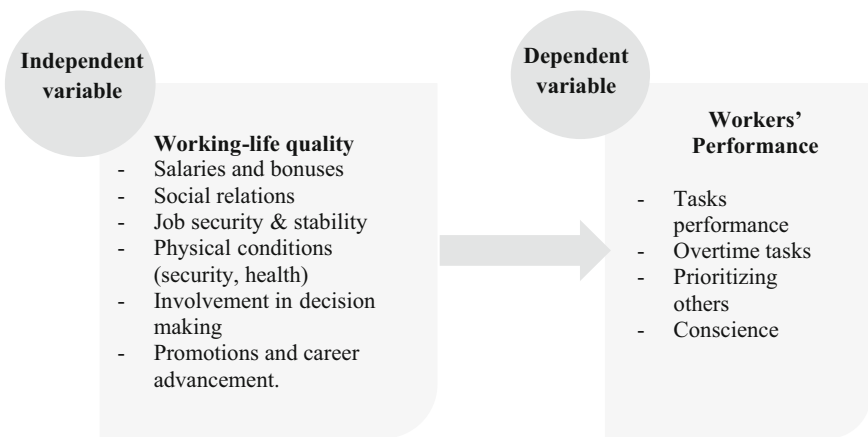


Fig. 1. Study model

3 Methodology of the Study

3.1 The Study Design and Sample

The descriptive analytical approach was followed to serve the purpose of the study objectives. As the study population consisted of all the employees working at UCAS (i.e., 330 male and female employees who are academic and administrative staff). Particularly, 160 were academics and 170 were administrative employees. It is worth mentioning that the pilot sample consisted of 30 employees who were randomly selected to check the validity and reliability of the data collection tool.

Accordingly, the simple random sampling technique was used, as the questionnaire was sent to the study population i.e. 330 employees, however, 185 questionnaires were retrieved (i.e. 56%).

3.2 StudyTool of the Study

A 54-item questionnaire was designed, by the researcher, to measure the impact of working-life quality on workers' performance at UCAS. The questionnaire contained three main sections (demographic data, working-life quality, and workers' performance) and each section has its own sub-dimensions. The domain of working-life quality included 33 items distributed over 6 sub-domains namely; Salaries and Promotions (6 items), Social relations (6 items), Job security and stability (6 items), Physical working conditions (5 items), Involvement in decision making (4 items), and professional advancement (6 items). On the other hand, the domain of workers' performance included 21 items distributed over 4 sub-domains namely; perform of tasks (7 items), Additional Tasks (6 items), altruism (4 items), and Consciousness (4 items).

3.2.1 Validity and Reliability of the Questionnaire

For external validity, the questionnaire was given to eight specialized referees in administration and entrepreneurship, as their comments were considered by addition, deletion, and omission. The study Cronbach's Alpha Coefficient was also used to verify the reliability of the questionnaire, as the results showed that the Cronbach's Alpha Coefficient for the working life quality domain was 0.927, and for the employees' performance domain was 0.909, while the Cronbach's Alpha Coefficient for the entire questionnaire it was 0.847 which is high and confirm the validity and reliability of the tool to collect the needed data.

4 Results and Discussion

4.1 Testing the First Hypothesis

(There is a statistically significant relation at $\alpha \leq 0.05$ between the working-life Quality and workers' performance).

To test this hypothesis, the Pearson correlation coefficient for the working-life quality (salaries and bonuses, social relations, job security and stability, physical working

Table 1. The Pearson correlation coefficient

Working-Life quality	Tasks performance		Overtime jobs		Prioritizing others		Conscience		Employees' performance	
	correlation coefficient	(Sig)	correlation coefficient	(Sig)	correlation coefficient	(Sig)	correlation coefficient	(Sig)	correlation coefficient	(Sig)
Salaries and Promotions	0.875	0.000	0.864	0.000	0.876	0.000	0.715	0.000	0.789	0.000
Social relations	0.759	0.000	0.687	0.000	0.779	0.000	0.635	0.000	0.782	0.000
Job security and stability	0.773	0.000	0.741	0.000	0.654	0.000	0.742	0.000	0.883	0.000
Physical working conditions	0.871	0.000	0.567	0.000	0.635	0.000	0.789	0.000	0.748	0.000
Involvement in decision making	0.775	0.000	0.631	0.000	0.691	0.000	0.881	0.000	0.866	0.000
Professional advancement	0.875	0.000	0.788	0.000	0.744	0.000	0.653	0.000	0.850	0.000
Working life quality	0.833	0.000	0.890	0.000	0.884	0.000	0.784	0.000	0.784	0.000

conditions, involvement in decision-making, promotions and career advancement and workers' performance) was calculated, as shown in the table below:

Table 1 shows that the correlation coefficient between salaries and workers' performance equals 0.789 This indicates that there is a positive correlation between salaries and workers' performance. The table also presents that the correlation coefficient between social relations, and workers' performance equals 0.782 which indicates that there is a positive correlation between social relations. Moreover, the results reveal that the correlation coefficient between job stability and security, and workers' performance equals 0.883 which indicates that there is a positive correlation between job stability and security, and workers' performance.

For the correlation between physical working conditions and workers' performance, it equals 0.748 which indicates that there is a positive correlation between physical working conditions, as one of the working life quality and workers' performance. The correlation coefficient between involvement in making decisions, as one of the working life quality domains, and workers' performance equals 0.886 and the probability value (sig) equals 0.000 which is less than $\alpha < 0.05$. This indicates that there is a positive correlation between involvement in making decisions, as one of the working life quality domains, and workers' performance. The correlation coefficient between promotions and Professional Development, and workers' performance equals 0.850 and the probability value (sig) equals 0.000 which is less than $\alpha < 0.05$. This indicates that there is a positive correlation between involvement in promotions and career advancement, as one of the working life quality domains, and workers' performance. The correlation coefficient between working life quality as a whole and workers' performance equals 0.784 and the probability value (sig) equals 0.000 which is less than $\alpha < 0.05$. This indicates that

there is a positive correlation between working life quality as a whole and workers' performance as a whole.

To sum up, the table shows that the average of all the dimensions of working-life quality is 3.37 (out of 5), which means that there is a medium degree of approval by the sample members on the items of the perceived working-life quality in general. It is worth mentioning that the results of the current study, in terms of working-life quality, go in line with the results of some of the previous studies such as the study of Abu Shamala (2018) which indicated a medium degree of approval, while the results of this study did not match the result of the study Al-Ustaz (2015), which indicated a high level of approval. The researcher attributes this to the very importance of working-life quality in the progress, development, and prosperity of the institution.

4.2 Testing the Second Hypothesis

(There is a statistically significant impact of the working life quality on workers' performance at $\alpha \leq 0.05$).

To test this hypothesis, the multiple regression model following the Stepwise method was used to identify the variables of working-life quality that affect the workers' performance the most. Results are shown in the table below:

Table 2. The multiple regression model

Variables	Regression coefficients		Beta	T value (T)	(Sig)
	Coefficient	Std error			
Constant	4.243	0.125		33.849	0.000
Salaries and bonuses	0.130	0.051	0.268	2.529	0.012
Job security and stability	0.138	0.062	0.282	2.231	0.027
Involvement in decision making	0.123	0.056	0.272	2.190	0.030
Promotions and career advancement	0.118	0.052	0.273	2.253	0.025
Coefficient of Determination $R^2 = 0.432$, F test value = 3.202, probability value sig. F = 0.014					

Table 2 shows that the estimated model is statistically significant at $\alpha = 0.05$, as the results show that the coefficient determination = 0.432 which means 43.2% of changes in workers' performance are due to the working-life quality; the remaining 56.8% are due to other factors. The factors that influence workers' performance the most in terms of working-life quality are salaries and bonuses, job security and stability, involvement in decision-making, promotion and career advancement. Therefore, the study recommends administrative departments take into consideration the working life quality of employees as it greatly improves the employees' performance at the institution.

On the other hand, the results of working life quality revealed that the average of 'salaries and bonuses' equaled 2.92 which means that the respondents show medium

agreement on the items of this domain. The salaries given to the employees at UCAS do not fulfill their requirements but are satisfactory. Also, the average of 'social relations' equaled 3.80 which means that the respondents show great agreement on the items of this domain. In other words, the UCAS administration seeks to reinforce social relations among its employees and tries to build trust and create love between them; which generally encourages positive interaction among employees from different positions. For the average of 'job stability,' it hit 3.16 which means that the respondents show medium agreement on the items of this domain. This means that job stability at UCAS exists but is insufficient. The UCAS is unable to deliver salaries on time due to students' delay in fee payment and the absence of support provided by the Ministry of Education and Higher Education in the Gaza Strip.

Additionally, the average of 'physical working conditions: security and health' equaled 3.81 which means that the respondents show great agreement on the clauses of this domain. This means that the UCAS administration seeks to offer its employees all means of comfort and security. The average of the 'involvement in the decision-making domain' equaled 3.37 which means that the respondents show medium agreement on this domain. This means that the UCAS administration tries to involve its employees in the decision-making process to encourage them to propose ideas necessary for professional development. Finally, the average of 'promotions and career advancement' equaled 3.17 which means that the respondents show medium agreement on the clauses of this domain. UCAS' administration offers its employees' promotion and career advancement opportunities but not to a satisfactory level.

With reference to the results of workers' Performance, the average of 'tasks performance' equaled 4.30 which means that the respondents show great agreement in this domain. This indicates UCAS employees' hard work and love for doing their jobs. The average of 'overtime job' came to 4.24 which means that the respondents show great agreement in this domain. This indicates UCAS employees' desire to improve and develop their academic institutions. Also, the average of the 'prioritizing others' domain came to 4.36 which means that the respondents show great agreement on this domain. This indicates UCAS employees' mutual moral support and positive interaction, and their desire to improve and develop UCAS which they belong to. Finally, the average of the 'conscience' domain equaled 4.50 which indicates that UCAS employees adhere to the UCAS goals and how committed they are to the assigned working hours. They also inform their departments in cases of delay, which reflects their great morals and good conscience.

In brief, the results show that the mean of employees' performance dimensions is 4.33 (out of 5), which means that there is a high level of agreement perceived by the participants on the items of the workers' performance in general. It is worth mentioning that this result is consistent with the study of Bahr and Abu Sweireh (2010). The researcher attributes this conclusion to the fact that the UCAS administration is constantly working on applying these dimensions and considering them. This was clearly reflected in the working-life quality at UCAS.

5 Conclusion and Recommendations

There is a statistically significant relation at ($\alpha \leq 0.05$) between the working-life Quality and its domains (salaries and bonuses, social relations, job security and stability, involvement in decision-making, promotions and career advancement, and physical working conditions) and the performance of UCAS' employees. There is a statistically significant impact at ($\alpha \leq 0.05$) of the working-life Quality and its domains (salaries and bonuses, social relations, job security and stability, involvement in decision-making, promotions and career advancement, and physical working conditions) on the performance of UCAS' employees.

In light of the results which revealed the positive impact of working-life quality on the UCAS employees' performance, some recommendations were formulated as follows:

- UCAS administration should provide rewards to the distinguished employees to motivate them for more outstanding performance, and to be a model for the rest of the workers to follow.
- The competent authorities, such as the government and the Ministry of Education and Higher Education, should fulfill their obligations towards the higher education sector in the Gaza Strip, i.e. pay the financial allocations for universities so that they can fulfill their obligations to their employees.
- Enhancing confidence between the staff and the college administration towards the decisions taken by the UCAS administration regarding the rights of employees and protecting their rights, through adopting the principle of participation in decision-making and not being singled out for it.
- Improving the level of job performance for the UCAS employees by providing the employees with all the material and informational needs they need to perform their tasks efficiently and effectively, and providing training programs according to the actual needs.
- Enhancing the employees' sense of job immersion in transforming work, through affording flexible organizational structures that allow delegation of powers, empowerment and participation; which helps them nurture their ideas and produce creative solutions and ideas.
- Improving the system of promotions in order to allow more effort and work by employees.

6 Suggested Research Recommendations

Based on the limitation of the current investigation, the researcher suggested the following areas for further research:

- Conducting studies to measure the impact of working-life quality on the performance of workers in other Palestinian universities in the Gaza Strip rather than the UCAS.
- Investigating the role of job involvement in increasing the working-life quality in Palestinian universities in the Gaza Strip.
- Conducting more studies on the working-life quality, and linking it to other mediator and moderator variables.

Appendix 1: The Questionnaire Domains, Sub-domains, and Items

Items and sub-domains of the Working-life Quality	
Salaries and promotions	
1.	My salary is enough to satisfy my life requirements
2.	I am satisfied with the bonuses that are added to my salary annually
3.	I get paid regularly without any delay
4.	There is a clear and appropriate system for salaries and bonuses in my administration
5.	I get a salary commensurate with my job duties
6.	My department works to provide rewards to its outstanding employees
Social relations	
1.	The college offers a social environment based on love between staff and management
2.	Collaboration and teamwork prevail between me and the college staff
3.	My administration encourages me to communicate interactively between all administrative levels
4.	My department subsidizes the costs of social visits on many occasions
5.	My department works to promote the principles of brotherhood and cooperation among all employees
6.	There are good friendships between me and the staff within the college
Job security and stability	
1.	I am willing to continue with my current job
2.	I take comfort from any threat of being laid off
3.	My management is working to provide its financial obligations to me on time
4.	The college administration is working on training me through several training and development programs
5.	My management is always keen on motivating me
6.	My department gives me the necessary compensation and insurance in case of accidents during work
Physical working conditions	
1.	The college administration provides a healthy environment suitable for work in terms of lighting, ventilation, and hygiene
2.	My administration follows up on all employees to implement safety and prevention measures during work
3.	The college administration has policies and laws related to occupational health and safety for employees
4.	The college administration holds training courses for occupational health and security for its employees
5.	The college administration provides the necessary equipment to perform the work, including offices and comfortable furniture for the employee

(continued)

(continued)

Items and sub-domains of the Working-life Quality

Involvement in decision making

1.	The college administration is keen to familiarize the employees with the goals it seeks to achieve
2.	My management participates in my decisions
3.	My management encourages me to provide suggestions and opinions for the development of the work and take them
4.	The college administration delegates part of the possible powers to subordinates

Promotions and career advancement

1.	My administration applies the promotion system based on clear administrative bases and criteria
2.	My department awards exceptional promotions to employees based on the efficiency of performance
3.	The college administration is keen to put the right person in the right place
4.	I have future opportunities for promotion in my job
5.	My administration is keen to implement training programs that qualify employees to advance in their career paths
6.	There is harmony between the academic qualifications and the job rank of the employees in the college

The sub-domains and items of the Workers' Performance domain

Tasks performance

1.	I make sure that I fulfill my basic job requirements on time
2.	I get my job done with the least amount of resources possible
3.	I do my job well by fulfilling the tasks expected of me
4.	I see that I am willing to work overtime
5.	I have enough experience and skills for the details of my work
6.	I can manage responsibilities greater than those entrusted to me
7.	I am highly skilled in carrying out my work assignments

Doing overtime tasks

1.	I volunteer to do more than is required of me for my job
2.	I want to do jobs that make me feel like part of my college
3.	I follow the procedures and instructions of my college in all my professional matters in order to protect its interests and its public image
4.	I take the initiative personally to prevent problems that may occur between my co-workers
5.	I am keen to develop the skills required for my future career

(continued)

(continued)

The sub-domains and items of the Workers' Performance domain	
6.	Whenever I have a problem in my work, I find solutions directly to it
Prioritizing others	
1.	I do the work of my colleague on his behalf while he is away from work
2.	I volunteer to help colleagues and students without an official order
3.	I help my new classmates integrate into college
4.	I make suggestions to my immediate superior to improve the quality of work
Conscience	
1.	I maintain accurate arrival and departure times for work
2.	I take a break from work to go back in time
3.	Notify the department in the event that I am unable to reach work for an emergency
4.	I leave my job during business hours only for necessary reasons




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ESG, Accounting and Implementation of Technology



An Econometric Assessment on Causal Relation Between Carbon Emissions and Economic Growth: India's Reference

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Abstract. This study examines the state of developing nations, particularly India and target to explore the relationship between growth and developmental issue on nature from the perspective of environmental stability. Considering the problems on the environmental condition, it has been revealed that numerous aspects are included in the condition of environment, such as water contamination, emissions, soil erosion, waste, and deforestation. Moreover, the carbon emission related pollution evolved as a significant cause for the pollution and records for about 75% of greenhouse gas releases. This paper postulated the effect of development on climate change in India. It has given that Carbon emissions will be more as India's GDP is increasing and also shown the reduction of emissions as the forest resources increases the analysis conformed the long run association between Carbon emission and GDP in India.

Keywords: CO₂ emissions · Gross domestic product · Energy consumption · Forest area

1 Introduction

Ecological deprivation both in number and quality is a main symbol of development which are the key carters of financial growth. Ecological degradation is the worsening of the atmosphere through reduction of capitals such as airborne, water and the soil. It is defined as the breakdown of the ground or worsening of the atmosphere through over consumption of natural resources. It is considered as any alteration or exacerbation to nature's lawn seen to be wicked or unwanted. It is also being defined as any modification or trouble to the atmosphere apparent to be toxic or objectionable. This paper indicates that the situation of developing nations, and aims to examine the association between financial growth and the compression on nature from the ecological sustainability viewpoint.

1.1 Objectives of the Study

To check the relation between carbon emissions and GDP, Forest area Covered and Energy consumption.

To check the causal relation among the variables. Variables include, Gross Domestic Product, Carbon Emissions, Forest area covered.

To check the long term and short-term association between Carbon Emissions and Gross Domestic Product.

To provide suitable suggestions to improve environmental quality without compromising development.

2 Literature Review

Sadi (2015), discussed about the impact of CO₂ emissions and economic growth on energy consumption in which the authors have taken the data of 58 countries using dynamic panel data model estimating by means of the Generalized Method of Moments (GMM) for the period 1990–2012. Sikdar and Kakali (2016), explained how population impacts the CO₂ emissions by taking the evidences from India. Nain, et al. (2015), stressed on the long and short run causal relationships among energy consumption, real GDP and CO₂ emissions using aggregate and disaggregate energy consumption measures utilizing annual data from 1971 to 2011. The ARDL bounds test reveals that there is long run cointegration relationship among variables concerned at both aggregate and disaggregate levels. Jaffe (2005), explained that the environmental market failure has been described in terms of an externality. But R & D is associated with positive externalities as well. Addressing both externalities is considered the dominant strategy. Nordhaus (2010), noted that CO₂ emission is not mattered for climate change nevertheless impacts the economic, social and political issues. Dong et al. (2017), used Extreme learning machine (ELM) and particle swarm optimization (PSO) to predict the CO₂ emissions for the development of the low-carbon economy in China. Antonakakis et al. (2017) and Sivasubramanian et al. (2022) studied the dynamic interrelationship in the output–energy–environment nexus.

Yang (2019) specified, the international community and the theoretical world have remunerated great care to whether and when China's carbon dioxide (CO₂) releases will reach the peak. Our study examines the subject with the Nonlinear auto regressive model with exogenous contributions (NARX), a active nonlinear false neural network that has not been applied earlier to this query. Sarkodie and Strezov (2019) explained, the rapid rise in greenhouse gas emissions have become a global concern catching the attention of policy makers and researchers all over the world.

3 Methodology

The Research methodology is considered as a precise process of methods used to classify, select, route, and analyze data about a particular theme. In a investigation paper, the practice section permits the reader to judgmentally assess a study's general rationality and consistency.

Data collection method

Secondary data has been collected for the purpose of conducting this research paper. The secondary data collected from various published information from both India and China. The major sources were collected from government offices, World Bank data, Ministry of environment and climate change.

The present study is grounded on available sources of time sequence data from 1960 to 2014 composed from numerous sources. The data is collected from the following bases.

- Handbook of Statistics on the Indian Economy RBI
- World Bank annual reports
- Ministry of Environment, Forest and Climate Change

Data Analysis

Descriptive statistics

In the descriptive statistics, one can know the summary of the given data. It includes Mean, Median, Maximum and Minimum values of the variables. Carbon dioxide (CO₂), Energy Consumption, Forest Area covered, and Gross Domestic Product (GDP) from 1960 to 2014 total 55 observations (Table 1).

Table 1. Descriptive statistics

	CO ₂	ENERGY_CONSUMPTION	FOREST_AREA	GDP
Mean	0.722145	360.4615	627471.2	1.88E+13
Median	0.595940	323.8831	629823.0	3.62E+12
Maximum	1.727671	636.5702	705036.0	1.25E+14
Minimum	0.267634	259.2446	555123.5	1.76E+11
Std. Dev	0.396408	104.9886	44546.58	3.04E+13
Skewness	0.851438	1.047059	0.080077	2.041312
Jarque-Bera	6.808626	10.09580	2.709122	64.29160
Probability	0.033230	0.006423	0.258061	0.000000
Sum	39.71800	19825.38	34510917	1.03E+15
Sum Sq. Dev	8.485531	595221.2	1.07E + 11	4.98E+28
Observations	55	55	55	55

In the above descriptive table, the Mean, Median, Maximum and Minimum, standard deviation, skewness values of variables CO₂, GDP, Energy consumption, and Forest area covered and normality in distribution of the variables has also been tested using Jarque – Bera test. The following histograms represents the distribution of given variables.

The mean and SD of CO₂ (0.722145 and 0.396408) indicates that Mean is greater than SD, we can consider the data is consistent since the carbon emission SD is comparatively

less than the graph show the right Skewness coefficient of indicates the observations are not completely analysed. Jarque-Bera test 6.88 infers the non-normal distribution of variables.

The mean and SD of GDP (1.88E+13 and 3.04E+13) indicates the data is inconsistent since SD is high when compared to mean. Skewness coefficient of 2.041312 indicates low positive skewness that means majority of the observation are less than the average.

The Fig. 2 explains the distribution of variables; it shows the right skewness of the distribution explains that the observations are not completely taken under calculation. Jarque-Bera test 64.29160 indicates the non- normal distribution of variable (Table 2).

Table 2. The descriptive of modified variables

	L_CO2	L_ENERGY	L_FOREST	L_GDP
Mean	-0.203191	2.540738	5.796518	12.60696
Median	-0.224798	2.510388	5.799219	12.55855
Maximum	0.237461	2.803846	5.848211	14.09580
Minimum	-0.572458	2.413710	5.744390	11.24633
Jarque-Bera	3.797599	5.233424	2.736349	3.722153
Probability	0.149748	0.073043	0.254571	0.155505
Sum	-11.17552	139.7406	318.8085	693.3827
Sum Sq. Dev	2.933297	0.730179	0.051427	40.63623

In the above descriptive table, the ‘L’ represents the logarithmic function of given variables, here the author has taken the log values of CO₂, GDP, Energy consumption, and Forest area covered in order to avoid the problem of non-normality in distribution of the variables and also to avoid differencing more than twice in the further analysis.

H₀: There is no correlation between the variables; (r = 0) (Table 3 and 4).

Regression Analysis

Table 3. Coefficients for GDP, energy and forest

Model		Unstandardized coefficients		Standardized coefficients	t	Sig	Collinearity statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.050	3.668		-.014	.989		
	L_GDP	.228	.029	.849	7.988	.000	.006	155.736
	L_Energy	.505	.076	.252	6.677	.000	.051	19.601

(continued)

Table 3. (continued)

Model	Unstandardized coefficients		Standardized coefficients	t	Sig	Collinearity statistics	
	B	Std. Error	Beta			Tolerance	VIF
L_Forest	-.744	.682	-.099	-1.091	.280	.009	112.340

a. Dependent Variable: L_CO₂

Table 4. Coefficients for GDP with CO₂

Model	Unstandardized coefficients		Standardized coefficients	t	Sig	Collinearity statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-3.577	.041		-87.927	.000		
L_GDP	.268	.003	.996	83.125	.000	1.000	1.000

After changing the method to forward only L_GDP is taken into estimation and the others are excluded even though the energy consumption is statistically significant.

Estimated model $L_{CO_2} = 0.996 L_{GDP}_i$ infers that as L_GDP increases by one unit, there will be an average rise of 0.996 units in L_CO₂, test stats $t = 80.125$ with significance level < 0.01 . Hence, we may reject the null hypothesis $\beta_0 = 0$ by saying there is significant relation between L_CO₂ and L_GDP.

Model Accuracy

Coefficient of determination R^2 explains the degree of variation of Y that is captured by the model (Table 5).

Table 5. ANOVA

Model Summary						ANOVA	
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	F	Sig
	.996	.992	.992	.0205251	.817	6836.356	.000

c. Dependent Variable: L_CO₂

Regression model is considered to be having good prediction accuracy if $R^2 > 0.6(60\%)$. $R^2 = 0.992$ (99.2%) which implies 99.2% variation of L_CO₂ is explained by the model, and the rest .8% is not captured. Hence, the model is good fit for prediction. However, the test of sig of R^2 is carried using ANOVA.

Null hypothesis $H_0: R^2 = 0$, the model of significance is not appropriate R^2 is not significant.

F stat = 6836.356, with sig value < 0.01, hence we may reject the null hypothesis $H_0: R^2 = 0$. That R^2 is stat significant. Durbin Watson test show the existence of positive autocorrelation 0.817 (Table 6 and 7).

Table 6. Hypothesis test

Test	Method	Null hypothesis	P – value	Status
Autocorrelation	Breusch-Godfrey test	No autocorrelation	2.22383e–005	Reject
Heteroskedasticity	Breusch-Pagan test	Heteroskedasticity not present	0.931563	Accept

Table 7. Augmented dickey fuller test

Variable name	Series at Level		First difference		Second Difference	
	<i>t-stat</i>	<i>p-value</i>	<i>t-stat</i>	<i>p-value</i>	<i>t-stat</i>	<i>p-value</i>
L_CO2	1.107	0.997	–7.56	2.318e–008	–	–
L_GDP	0.9984	0.9967	–5.277	5.342e–006	–	–
L_Forest	–0.721	0.839	–3.621	0.005389	–	–
L_Energy	5.70341	1.00	–3.24097	0.07648	–4.24675	0.003734

The above table contains the results of Augment dickey fuller test of different variables it explains the stationarity of given variables. Firstly, at series level all the variable L_CO2, L_GDP, L_Forest and L_Energy are accepting the null hypothesis, $r = 1$ or unit root is present because the p- value of the given variables are greater than 5%.

Secondly, since at series level the data has not become stationarity, the researcher took first difference of the variables and except L_Energy consumption, the variables rejecting the null hypothesis $r = 1$ or the presence of unit root because the p-value is less than 5% (Table 8).

Table 8. Lags model

Lags	Akaike information criterion	Schwarz criterion
4	–5.934	–5.51
3	–5.98	–5.64
2	–5.86	–5.60

It is very important to estimate the number of lags to make the current model. Based on the above Akaike information criterion and Schwarz criterion, the value of lags is fixed

as 3 because the criterion value is minimum at 3 lags. Further analysis is made using 3 lag model, the estimated ARDL model is changed as $d(l_co2) c d(l_co2(-1)) d(l_co2(-2)) d(l_co2(-3)) d(l_gdp(-1)) d(l_gdp(-2)) d(l_gdp(-3)) l_co2(-1) l_gdp(-1)$. The hypothesis model of ARDL with 3 lags. Adjusted $R^2 = 0.3121$ which means 31.21% of changes only explained in the model and rest is not captured by the model. Since L_GDP is statistically significant the analysis can be taken further but to say the variables are moving together or have an association there are some criteria to be satisfied such as no serial correlation and stability of variable.

Serial correlation is tested by using Breusch – Godfrey test of Autocorrelation and the results are as follows (Table 9).

Table 9. Breusch-Godfrey serial correlation LM test:

F-statistic	0.951229	Prob. F(2,40)	0.3948
Obs*R-squared	2.315506	Prob. Chi-Square(2)	0.3142

Null hypothesis H_0 : there is no Autocorrelation.

The F – statistic = 0.951 with p – value 0.39 > 0.05 and the observed $R^2 = 0.3155$ with chi- square significant value = 0.3142 > 0.05. Hence, we may accept the null hypothesis saying there is no auto correlation.

4 Results and Discussion

The study contains total of 5 variables Carbon Emissions (CO_2) which is calculated in million metric tons, Gross Domestic Product (GDP) calculated in trillions, Energy consumption calculated in Kilograms and Forest area covered in Square kilometres. The researcher found that the skewness of above given variables is not normally distributed which has also proven through Jarque- Bera test the values are 6.808, 64.291, 10.0958, and 2.70 respectively. The distribution has rightly skewed as shown in Sect. 4. In order to avoid the problem of skewness the variables are transformed into their logarithmic function. The logarithmic variables are L_CO_2 , L_GDP , L_Energy , and L_Forest area. The skewness values that proven through Jarque- Bera test are 3.7975, 3.722, 5.233, and 2.73 respectively shows the normality of distribution and avoidance of skewness in model as shown in the analysis chapter. The further tests were done on logarithmic variables.

The model states that Carbon emissions are depended upon the variables like GDP, Forest and Energy. The relation between Carbon emissions and GDP is 0.996 which states the high positive correlation between them and they both are moving in same positive direction. The shape is upward curve from left to right. This interprets as the Carbon emissions increases the GDP of the nation will also increase. The relation between Carbon emissions and Energy Consumption is 0.983 which states the high positive correlation between them and they both are moving in same positive direction. The shape is upward curve from left to right. This interprets as the Carbon emissions increases the

Energy Consumption of the nation will also increase. The causation between Energy and Carbon emissions resulted as bi-directional. It shows, Energy granger causes Carbon emissions ($L_Energy \rightarrow L_CO_2$), as the energy consumed more the emissions will increase. As the Carbon emissions increase the Energy consumption will rise is explained by Carbon emissions granger causes Energy ($L_CO_2 \rightarrow L_Energy$). The causation between Energy and Forest area covered resulted as Independent. It shows, Energy does not granger causes Forest ($L_Energy \rightarrow L_Forest$), as the energy consumed more there is no effect on forest. As the Forest area increase the Energy consumption will have no effect is explained by Forest area does not granger causes Energy ($L_Forest \rightarrow L_Energy$). The causation between Energy and Gross Domestic Product resulted as Independent. It shows, Energy does not granger causes Gross Domestic Product ($L_Energy \rightarrow L_GDP$), as the energy consumed more there is no effect on GDP. As the GDP increase the Energy consumption will have no effect is explained by Gross Domestic Product does not granger causes Energy ($L_GDP \rightarrow L_Energy$).

5 Conclusion

The world institutes like United Nations, World bank and so on are taking measures by making many pro environmental policies to overcome the problems of Climate change, but the policies implementations are not as effective as they planned. The developed nations like the USA, etc. are escaping by blaming developing nations like India, China, etc. for climate change and vice versa. The current study postulated the effect of development on climate change in India. It has given that Carbon Emissions will be more as India's Gross Domestic Product is increasing and also shown the reduction of emissions as the forest resources increases. The association analysis also conformed the long run association between Carbon emission and GDP in India. The study can be concluded by even though, India's position in climate change is less compared with China and other developed nation, the emissions in India is rising as the India moving towards growth. The following suggestions can be advisable through the analysis to reduce Carbon emissions without compromising Growth.

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Strategy Implementation in a Developing Country Multinational (Etisalat): A Factor-Analytic Investigation

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Abstract. The study aims to explore the factors that may have a significant impact on Etisalat's strategy implementation in the telecommunications sector. To do so, quantitative method approach was applied through a survey questionnaire that distributed and addressed to the employees of Etisalat. A combination of exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) was used to achieve the study's objective. Based on an empirical exercise, success factors in the technology strategy implementation are identified, which are planning factors; organizational factors; managerial factors; and individual factors. It provides significant policy implications for Etisalat's successful implementation of its strategy in the UAE telecommunications market. For example, for successful implementation of strategies, managers must understand the factors required. Successful implementation of Strategy can also help an organization mitigate resistance to change and improve its competitiveness.

Keywords: Etisalat · Technology strategy implementation · UAE · Factor analysis

1 Introduction

Implementing a strategy successfully is crucial for the sustainability of any organization. The absence of implementation strategies makes many organizations unable to sustain their superiority position even with robust strategy formulation methods (Rajasekar 2014). Bell et al. (2010) argue that executing a strategy creates operational challenges and is the most challenging element of strategic management, while formulating a strategy is a creative and intellectual endeavor. A recent study by Čater and Pučko (2010) showed that 80% of firms have appropriate strategies, but only 14% have successfully implemented them. Consequently, it is crucial to understand how successful strategies are implemented. Thus, developing effective strategic management requires people to make daily decisions based on strategy.

In the strategy process, implementation is considered to be the second major step. This is because of implementation is about putting the strategic plan into action effectively. For this purpose, the broadly stated plan had to be broken down into a series of

time-phased action programs. Basically, this specifies the type and quantity of resources needed to achieve the planned strategy at certain dates (Cohen and Cyert 1973). Also, it is imperative to determine whether certain organizational changes will improve the chances of successful implementation (Cohen and Cyert 1973). The implementation of strategies is also constrained by a number of organizational attributes. Among the most influential aspects are culture, structure, politics, and management style (Koskei 2003). In general, implementing strategies is a key concern for all organizations, public and private. Arguably, this kind of situation is related to several factors (Govindarajan 2017).

To be specific, in the UAE Etisalat developed a strategy to compete effectively in the market. Putting the strategy into practice is now the challenge. More so, due to the liberalization of the telecommunications industry, Etisalat is now facing competition in a market that it used to dominate. Since the company recognized that competition would soon arrive, they developed a master plan to steer them in the right direction. In order to meet competitive challenges, Etisalat's Master Plan comprises both grand strategies and functional strategies to guide the company's development. In particular, in 2005, the telecommunications market in the UAE was liberalized and a new competitor entered the market. This paved the way for Etisalat to formulate more effective strategies in order to compete more effectively. Considering the remarkable development in the business history of Etisalat, it would be interesting to identify the factors involved in implementing strategies, and bridge knowledge gaps.

2 Literature Review

In recent decades, a substantial amount of research has been conducted on the implementation of strategies (Alexander 1985; Noble 1999; Pechlaner and Sauerwein 2002; Hambrick and Cannella 1989; Dooley et al. 2002; Repert et al. 2002; Govindarajan 2017; Kari Jalonen et al. 2018; Tawse et al. 2021). In general, scholars and practitioners believe that after formulating a strategy, it is logical to move in the direction of implementing it through short-term tactical actions (Drucker 1974; Thompson and Strickland 2001; Stonick 1982; and Pearce and Robinson 1991). It is interesting to note that strategy implementation research constitutes only a small portion of all research on strategy (Judson 1991). Despite this situation, scholars have not been motivated adequately to focus on various issues relating to strategy implementation. Admittedly, there appears to be acknowledgement in literature that it is more important for managers to execute strategies than to design top-quality strategies (Kaplan and Norton 2000). In enhancing organizational performance, strategy formulation is just the beginning of the process (Wery and Waco 2004; Collis 2021).

The question raised by Rajasekar (2014) is whether organizations and executives should develop innovative and novel strategies to gain a competitive advantage and implement them, or do they first pinpoint the strengths of the organization and then create a practical and effective strategy based on those insights? In other words, a well-formulated strategy won't be effective unless it is implemented correctly. Developing a strategy that fails to consider a wide variety of factors may, however, lead to a strategy that is not competitive and, therefore, pointless and ineffective. In their study, Zaribaf and Bayrami (2010) discovered that most business leaders devote substantial effort and

energy to coming up with strategies but offer only limited input on how to execute them. More precisely, in order to ensure successful implementation, an innovative and workable strategy must be balanced. There are several studies that suggest that formulating and implementing strategies is crucial to the survival and expansion of an organization (Cater and Pucko 2010; Ashkenas and Francis 2000; Carlopio 2012; and Beer and Nohria 2000). Furthermore, they found that executing a strategy was more challenging than formulating one. This is because formulating the strategy requires leadership skills, meticulous preparation, and the arranging of financial support and human resources; implementing requires creativity, business understanding, and assessment of market opportunities and the firm's strengths (Rajasekar 2014). As Rajasekar (2014) noted, while top management is usually responsible for formulating strategies, middle and lower managers are responsible for implementing them. However, top management must prepare a strong strategy and communicate it clearly to middle managers so that they can easily follow it.

Furthermore, the current literature indicates nearly 5% of an organization's workforce understands its strategy (Kaplan and Norton 2001). When employees don't understand the meaning and direction of a strategy, they can't contribute effectively to its implementation (Alexander 1991).

In addition, strategy implementation in a multinational firm operating in a developing country has not been subjected to a rigorous assessment. This neglect is mainly due to the non-availability of empirical data. Therefore, an attempt is made in this study to make an empirical assessment of strategy implementation in Emirates Telecommunication Group Company PJSC (Etisalat), a large telecommunications services provider in the UAE. In addition to filling a gap in the current literature, this study is likely to have interesting managerial implications. This study's overarching objective is therefore to identify the factors that will facilitate Etisalat's implementation of its strategy.

3 Research Methodology

It would be interesting to explore which factors affect the technology strategy implementation in Etisalat. The methodology applied for this study analysis is the quantitative approach. Further, in this study, exploratory factor analysis (EFA) is combined with confirmation factor analysis (CFA) in order to explore and validate the factors that may have a significant influence on Etisalat's technology strategy implementation.

Sampling Procedure

The study targeted Etisalat employees as the study's population. A stratified sampling method was used to confirm that each member of the population had equal and independent chances of being selected and included in the study. This study collected data using a self-administered questionnaire. This method is practical in the contemporary work environment because of limitation of time to meet in person.

3.1 Research Instrument and Measurement

In order to survey Etisalat's employees, a questionnaire has been developed. Using this instrument, we were able to identify factors that contribute to successful strategy implementation. Based on an extensive literature review (Salganik and Heckathorn 2004),

the survey items were developed. Additionally, seven senior managers working in Gulf countries were asked for feedback regarding the scale items. An evaluation of the survey instrument was conducted with 15 members of the organization before the survey was administered. A revised and simplified survey instrument was developed after feedback from managers and pre-testing (Hair et al. 2006). As follows, we designed the questions so that they could be answered using Likert type scales.

3.2 Data Collection

Data was collected for this research through survey questionnaires. The questionnaires were sent to staff via email. Etisalat has a reliable e-mail system that researchers may use for the online survey to reduce collection time and analysis time. 750 questionnaires were distributed. 623 questionnaires were returned. Following a process of data cleaning, 521 questionnaires were found to be usable. As shown in Table 1, we provide demographic information about the respondents.

Table 1. Background information about the respondents

	Percentage
Gender	
Male	59.7
Female	40.3
Nationality	
UAE	61.6
Arab Expatriate	24.4
Other Expatriate	14.0
Qualification	
Undergraduate	16.1
Bachelor's degree	50.9
Postgraduate/master's degree	18.6
Professional Degree	8.3
Others	6.1
Work Experience	
≤5 years	15.2
6–10 years	38.0
1 –15 years	27.8
> 15 years	19.0
Total number of respondents	521

4 Analysis Results

4.1 Factor Analysis Results

We performed both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) to ensure that the constructs and items contained in the instrument were relevant. Statistically, CFA was conducted in order to assess composite reliability, convergent validity, and discriminant validity. Due to cross-loading, items having loading factors larger than 0.3 on two or more factors were deleted. As a result, 30 questions were left to be addressed to the respondents. In the context of CFA, it needs to be pointed out that all item loadings emerged to be greater than the minimum acceptable value of 0.5 (Hair et al. 2006), indicating adequate validity. All factors loadings showed significant t-values ($p < .001$). Moreover, all the loadings were above 0.5, which was indicative of acceptable convergent validity (Hair et al. 2006). As illustrated in Tables 3 and 4, we computed the average variance extracted (AVE) and composite reliability of the measures to determine their convergent validity. In statistical terms, these were found to be above the cut-off levels: C.R. $> .70$ (Chin 1998) and AVE $> .50$ (Fornell and Larcker 1981) (Tables 2).

Table 2. Principal component factor analysis (varimax rotation), factor loadings, and AVE*

Construct	Items	Factor Loadings	Cronbach α	Composite reliability	AVE
Planning factors	Q1	.591	0.915	0.867	0.621
	Q2	.628			
	Q3	.709			
	Q4	.665			
Organizational factors	Q5	.794	0.869	0.853	0.575
	Q6	.792			
	Q7	.686			
	Q8	.683			
	Q9	.744			
	Q10	.649			
Managerial factors	Q11	.688	0.826	0.849	0.573
	Q12	.668			
	Q13	.707			
	Q14	.692			
Individual factors	Q15	.730	0.813		0.571
	Q16	.756			
	Q17	.703			
	Q18	.707			

(continued)

Table 2. (continued)

Construct	Items	Factor Loadings	Cronbach α	Composite reliability	AVE
	Q19	.639			
	Q20	.641			
	Q21	.649			
	Q22	.748			
	Q23	.762			
	Q24	.775			
	Q25	.760			
	Q26	.691			
	Q27	.638			
	Q28	.647			
	Q29	.639			
	Q30	.637			

* Cronbach's alpha > 0.7 (Peterson 1994); CR > 0.70 (Chin 1998); AVE > 0.50 (Fornell, and Larcker 1981).

Table 3. Inter-construct correlations

	F1	F2	F3	F4
F1	1			
F2	.636**	1		
F3	.064	.092*	1	
F4	.576**	.609**	.130**	1

** . Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

The discriminant validity of the model was also tested. Generally, discriminant validity is assessed by comparing AVEs of measures along with correlations associated with those measures (Fornell and Larcker 1981). It is interesting to note that discriminant validity has also been established in empirical exercises when the square root of the AVE of each construct is significantly larger than its correlation estimate and all other inter-construct correlations. The measures in our study were explicitly proven to be discriminantly valid. A four-factor CFA measurement model used in this study had GFI, AGFI, and CFI values that exceeded the benchmark of .90, indicating that it fits well (Nunnally 1978).

4.2 Finding Discussion

This study has found, through an empirical exercise, that successful strategy implementation is affected by planning, organizational, managerial as well as individual factors. The findings are in line with extant literature (e.g., Pechlaner and Sauerwein 2002; Alexander 1985; Dooley et al. 2002; Hambrick and Cannella 1989; and Repert et al. 2002) and positively address the research questions posed in this study. These factors need to be examined and studied carefully because strategy implementation is a complex process and the factors affecting it may not necessarily be the same across organizations and business sectors. An empirical study of this kind has certainly enriched existing knowledge and can help practicing managers take effective decisions (Kaplan and Norton 2001).

Based on the results of this study, it can be concluded that constructs related to strategy implementation are interrelated and interdependent. It is important for researchers to consider the process of developing and implementing strategies holistically. Despite the fundamental function of strategy in any organization is to carve a competitive edge, engaging all stakeholders in strategy implementation is also vital. The employees, in particular, must be engaged in interesting and useful discussions and dialogues to make strategy implementation a successful exercise.

Strategic planning poses a challenge, particularly in the context of a smart technology-oriented organization such as Etisalat. The factors identified in this study may be used to evaluate the performance of the organization (Kaplan and Norton 2001). The factors identified in this study can of course help Etisalat to realign its activities in a competitive environment. As the regional and global markets for Etisalat become increasingly competitive, the questions posed in this study are quite relevant. A virtual majority of experts in focus groups suggested that the organization lacked appropriate measures and strategies or, more seriously, had ineffective international competitiveness strategies. Indeed, the findings of this study suggests that the constructs related to strategy implementation can of course enhance both international competitiveness and business sustainability.

The constructs and the wide array of factors therein that emerged through an empirical survey were mainly due to the fact that Etisalat possesses enormous human capital, financial, technological and various other resources, allowing it to implement strategies that smaller and medium-sized firms hardly afford. Similarly, practicing such activities as strategic planning requires tactical control in a very coherent and formal manner. Etisalat has a robust system of producing a comprehensive strategic plan and implementing it across the organization.

4.3 Managerial Implications

A carefully crafted dynamic strategy implementation can also help address the organizational resistance to change and innovation. The dynamic approach that managers can of course adopt includes a mix of strategy implementation activities that set the stage for organizational learning in terms of technological projects, pilot programs in the Gulf region and indeed elsewhere in the world and applied learning programs for the employees. The dynamic approach may lead to desired deliverables and value, particularly in the early stages of an implementation effort, enhancing organizational learning, inter-functional alignment, and positive organizational climate across.

4.4 Research Constraints and Directions for Future Research

The study examined a number of factors related to implementing technology-based strategies, but further studies could take up the thread from here to address, for instance, organizational culture and strategic implementation. Scholars of strategy may consider this as an additional research topic in order to understand the role innovation-driven technology acceptance plays in the context of strategy implementation (Davis et. al. 1989; Collis 2021).

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The Association Between the Structure of the Capital and Profitability in Palestinian Local Banks

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Abstract. The current study was meant to investigate the association between the structure of the capital and profitability in the six local Palestinian banks listed on the Palestine Stock Exchange for the period 2011–2020. The researchers aimed to investigate whether there are differences in the financial structure between the banks that have a large returns on assets and those that have little returns on assets; whether there are differences in the debt ratio between the banks that have large returns on assets and those that have little returns on assets; and finally if there are differences in the structure of the capital between the banks that have lofty share of earnings per share and those that have a little share of earnings per share. The researcher used a non-parametric test. The Mann-Whitney U test indicated that Z-value (-2.070) is significant at 5%. Therefore, the researcher reject the null hypothesis and accepts the alternative hypothesis, which states that there is a statistically significant difference in the structure of the capital between the banks that have great returns on assets and those which have little return on assets, is accepted. However, the Mann-Whitney U test for the other hypotheses did not show statistically significant differences.

Keywords: Profitability · Capital structure · Leverage · ROA · EPS · Debt ratio

1 Introduction

Banks are not likely to proceed in the actions and transactions they carry out unless they have the needed or required funds to finance their current as well as fixed assets. Unlike the industrial, commercial and service companies and firms, banks differ from in the degree of their dependence on external fund sources due to the different nature of their actions and their use of various sources of financing. Therefore, banks resort to differentiating between financing sources in terms of costs, risks, returns, time period, participation in management and the obligations arising from it in terms of interests and installments reach the optimal financing structure, which maximizes the cost/value of the facility, as that value is, generally speaking, the value of debt plus the value of equity.

The financing decision in corporations or companies in general, and in banks in specific, is one of the most significant decisions that affect the cash flows of the corporation/company, its profitability, and its liquidity. This decision is associated with

determining the percentage of financing from short-term and long-term sources, as well as determining the appropriate mix of debt and ownership sources. The use of the optimal financing mix is deemed significant because it minimizes the cost of capital in the company, thus maximizing its value and increasing the profitable investment chances that are available to the company.

The Palestinian banking system is considered one of the most important pillars of the Palestinian economy, as it plays a crucial role in supporting the Palestinian economy and stimulating development processes, by playing a mediating role between the surplus parties (savers) and the deficit parties (borrowers) in the economy. Besides, the Palestinian banking system has achieved real successes in accumulating the savings of Palestinians at home and abroad, and using them to provide the necessary credit to finance various economic projects through the processes of providing loans on the one hand and direct contribution to these projects on the other hand, as well as providing credit to the families and government sectors for consumption and investment purposes.

1.1 Statement of the Problem

Financial management of the institution faces a critical decision regarding financing. The institution can use short-term together with long-term commercial debt and bonds for financing, or it can use typical shares, compulsory reserves, voluntary reserves, and the profits that are undistributed as equity. The association between the structure of the capital and the value of the facility has considerably motivated many researchers, academics, facility management and employees to investigate the topic. Consequently, this study was meant for find out how equity to assets and liabilities to assets relate to the capital structure of Palestinian banks listed on the Palestinian Stock Exchange. We analyzed the performance of those banks by measuring or comparing them against the return on assets and net profit share, in order to develop some useful results and present recommendations that would enhance Palestinian bank performance. Thus, the main promise of this power is to find out whether there is an association between the capital structure and profitability among Palestinian banks? In order to discuss this problem more easily, the researchers tried to answer the following sub-questions:

- 1 Are there significant differences in the capital structure of banks that have a great return on assets and those banks that have a little return on assets?
- 2 Are there significant differences in the debt ratio for the banks that have a great return on assets and those that have a little return on assets?
- 3 Are there significant differences in the capital structure between the banks that have a great share of earnings per share and those that have a little share of earnings per share?
- 4 Are there significant differences in the capital structure between the banks that have a high share of earnings per share and those that have a low share of earnings per share?

1.2 Importance of the Study

An important indicator for measuring the financial conduct/performance of banks and companies is their profitability, which measures how well they use their resources to

maximize profits for shareholders and to increase the value of their businesses. Financing decisions are crucial to public financial management in public facilities or companies and in the banking sector in specific. The public sector constitutes among the most important Palestinian economic sectors due to its important role in accumulating savings and redirecting them to various economic activities and individuals; moreover, this sector constitutes a link between the domestic, local economy and foreign economies.

It is expected that the results of the current paper, which attempts to demonstrate the association between the capital structure and the financial conduct/performance of Palestinian banks, to attract the attention of or be of great interest to bank administrations, shareholders, investors, creditors, financial analysts, and supervisory authorities represented by the PA.

1.3 Study Hypotheses

- 1 There are no significant differences in the capital structure between banks that have a great return on assets and those that have a little return on assets
- 2 There are no statistically significant differences in the debt ratio between banks that have a great return on assets and those that have a little return on assets.
- 3 There are no statistically significant differences in the capital structure between the banks that have a high share of earnings per share and those that have a low share of earnings per share.
- 4 There are no significant differences in the structure of the debt ratio between the banks that have a high share of earnings per share and those that have a low share of earnings per share.

1.4 Study Population and Sample

The study population consisted of the local banks that are listed in the Palestinian Stock Exchange, except for Al-Safa Bank, due to a lack of financial data. The six banks that had adequate financial data during the period from 2011 to 2020 included Bank of Palestine, Al-Quds Bank, Palestine Investment Bank, The National Bank, The Arab Islamic Bank, and Palestine Islamic Bank.

2 Review of the Literature

An empirical investigation of the effect of capital structure on firm conduct/performance was undertaken by Ebrati et al. (2013) in order to find out the association between leverage level and firm performance using multiple regression analysis. Based on data from the Karachi Stock Exchange, (Saeed, et al., 2013) examined how capital structure affected Pakistani banks' performance from 2007 to 2011. While in Ghana, Awunyo-Vitor and Badu (2012) carried out an empirical study to assess the relation between the capital structure of the listed banks and their conduct/performance over the period 2000–2010. During the period between 2006 to 2009, (Umar, et al., 2012) examined how capital structure impacts the financial conduct/performance of best 100 consecutive

Karachi Stock Exchange companies. They used exponential generalized least square regression to examine the relation between capital structure and firm profitability.

Based on an investigation of the relation between market efficiency and capital structure of Palestinian financial institutions, Abbadi and Abu-Rub (2012) developed a model to find out the influence of capital structure on the efficiency of the bank which can be measured by ROE, ROA. The capital structure of a corporation or a firm can be one of its most important choices, and its success can be determined by its capital mix and structure (Luper and Isaac, 2012). In his study of Egypt as one of the recent emerging economies, Ebaid (2009) conducted a study to estimate the association between leverage level and firm performance using the multiple regression analysis. As a result of using three accounting-based financial performance measures (return on assets, return on equity, and gross profit margin), the researcher concluded that choosing capital structure does not affect firm performance as much as it does on financial performance.

A comparative analysis of 167 Jordanian firms between 1989 and 2003 was conducted by Zeitun and Tian (2007), the researchers showed that a firm's capital structure negatively affected its performance measures. Besides, the capital structure of banks in Ghana was analyzed by Amidu (2000) using a panel regression model to examine the dynamics involved in determining this structure. According to the study, profitability, growth, asset structure, corporate taxation, and bank size all affect bank and decisions related to its capital structure. Utilizing the framework of fixed-and random-effects techniques, Kyereboah-Coleman (2007) examined how microcredit institutions' capital structure impacts performance using the Panel data during the period between 1995-2004. Joshua (2005) carried out a study to find out the relationship between capital structure and profitability of the companies listed in Ghana Stock Exchange.

3 Methodology

3.1 Dependent Variables of the Study

Financial ratios are useful indicators that reflect the financial performance of institutions, and they can be calculated depending on financial statements.

1 Return on assets (ROA)

Return on Assets is usually measured by dividing the net profit after interest and tax on the total assets.

2 Earning Per Share (EP)

It is measured by dividing the net profit after interest and tax by the number of ordinary shares issued to the bank; this measure indicates the amount of profits achieved by one share.

3.2 Independent Variables of the Study

The independent variables include the capital structure ratios (Capital Structure Ratios) and these ratios are used as a tool to assess the bank's ability to meet its obligations, especially long-term. High financial leverage increases the bank's exposure to insolvency, bankruptcy and liquidation risks, but at the same time it causes a conflict of

interest between creditors and owners. Creditors want low-risk investments to secure their rights, while owners look for investments that bring them high profits.

1- Total Liabilities to Total Assets Ratio (Leavrage Ratio).

This ratio is among the most widely used indicators to measure the degree of use of external sources of financing in the bank’s financing structure, and to determine the amount of debts per dinar of total assets.

2- Total Liabilities to Total Equity (capital struc ratio).

This ratio shows the ratio of debt to equity; it is considered an indicator of the potential risks faced by the bank in terms of debt burden.

4 Statistical Analysis

Descriptive Statistics and Normality Test

In this part, some descriptive statistics related to the study sample will be identified the normal distribution test is also identified here. There are many statistical tests that examine the consistency of the data in terms of achieving the condition of the normal distribution. We made up our minds to use Jarque-Bera test in this study to identify the extent of the normal distribution of the data.

Table 1. Descriptive statistics and test of normality

Descriptive statistics					
	N	Mini	Ma.xi	M	SD
Capital	60	0.01	11.88	0.7986	2.16441
Leverage	60	0.09	7.8	0.822	0.96283
Eps	60	0.35	12.4	6.1804	3.22984
Roa	60	0.01	0.87	0.0588	0.1109
Valid N (listwise)	60				

Table 1 above shows that the minimum capital structure ratio was (0.01).

As for earnings per share (EPS), it ranged between 12.4 and 0.35, and on average it has reached 6.1804. This is a good percentage and it indicates that companies are able to create value. As for the ratio of debt or financial leverage (LEV), it ranged between 7.8 and 0.09, and this shows an apparant discrepancy in the process of debt management in banks. This averaged return on assets (ROA) was about 0.0588, with a standard deviation equal to 0.1109 (Table 2).

In case the value is more than 5%, the researcher accpets the null hypothesis; this means that the data are distributed normally. It is clear from the Jarque-Bera test that the available data is not normally distributed; this calls for the use of other means to

Table 2. Jarque-Bera test

	CAPITAL	EPS	LEV	ROA
	8137.331	1505.732	5382.294	5647.304
Probability	0	0	0	0

address this problem. The researchers decided to use the nonparametric measures to test hypotheses.

Pearson Correlation Matrix for the Study Variables

Table 3 the first variable, which is the ratio of the capital structure CAPITAL, and the other variables vary in terms of strength and direction. There is a negative association with the return on assets - .043 and a positive association with both the financial leverage 0.007 and the earnings per share 0.069. In terms of strength, the lowest was the financial leverage ratio.

The correlation coefficients between the third variable, earnings per share (EPS), also varied in strength and consequently there is a positive association with the return on assets, financial leverage and capital structure.

Table 3. Pearson correlation matrix for the study variables

Correlations		Capital	Leverage	eps	Roa
Capital	Pearson Correlation	1	0.007	0.069	-.043-
	Sig. (2-tailed)		0.957	0.598	0.746
	N	60	60	60	60
Leverage	Pearson Correlation	0.007	1	0.048	0.073
	Sig. (2-tailed)	0.957		0.717	0.582
	N	60	60	60	60
Eps	Pearson Correlation	0.069	0.048	1	0.188
	Sig. (2-tailed)	0.598	0.717		0.15
	N	60	60	60	60
Roa	Pearson Correlation	-.043-	0.073	0.188	1
	Sig. (2-tailed)	0.746	0.582	0.15	
	N	60	60	60	60

Testing the Null Hypotheses

- 1 There are no significant differences in the capital structure between banks that have a great return on assets and those that have a little return on assets.

Table 4. Test statistics

Test Statistics ^a				
	leverageroa	capitalroa	Leverageeps	capitaleps
Mann-Whitney U	444.000	310.000	401.000	325.000
Wilcoxon W	909.000	775.000	866.000	790.000
Z	-.089-	-2.070-	-.724-	-1.848-
Asymp. Sig. (2-tailed)	.929	.038	.469	.065

a. Grouping Variable: VAR00003

The Mann-Whitney U test results indicated that Z (-2.070) in the second column of Table 4 is significant at 5%, and accordingly, the null hypothesis is rejected and as a result, the alternative hypothesis, which states that there are significant differences in the capital structure between banks that have a great return on assets and those that have a little return on assets, is accepted.

2- There are no significant differences in the debt ratio between banks that have a great return on assets and those that have a little return on assets.

The Mann-Whitney U test results indicated that Z (-.089) in the second column of Table 3 is found to be insignificant at 5%, and accordingly, the null hypothesis, which states that there is no significant difference in the debt ratio between Banks that have a great return on assets and those that have a little return on assets, is accepted.

3- There are no statistically significant differences in the capital structure between the banks that have a high share of earnings per share and those that have a low share of earnings per share.

The Mann-Whitney U test results indicated that Z (-.089) in the second column of Table 4 is found to statistically insignificant at 5%, and therefore the null hypothesis, which states that there is no significant difference in the debt ratio between Banks that have a high return on assets and those that have a low return on assets, is accepted.

The results of the Mann-Whitney U test also showed that the value of Z (-1.848) in the fourth column of Table 4 is insignificant at 5%, and consequently, the null hypothesis, which states that there is no significant difference in the capital structure between Banks with high earnings per share and low earnings per share, is accepted.

4- There are no significant differences in the structure of the debt ratio between the banks that have a high share of earnings per share and those that have a low share of earnings per share.

The Mann-Whitney U test results indicatd that Z (-.724) in the third column of Table 4 is not significant at 5%, and therefore the null hypothesis, which states that there is no statistically significant difference in the structure of the debt ratio among the banks that have high earnings per share and low earnings per share, is accepted.

5 Conclusion

Some descriptive statistics for the sample (e.g., mean, median, standard deviation, highest value, lowest value) and the normality test were calculated. The EPS amounted to 6.1804, and this is good as it indicates that companies were able to create their own value. As for the ratio of debt or financial leverage (LEV), it ranged between 7.8 and 0.09, and this shows an apparent discrepancy in the process of debt management in banks. The first hypothesis examined the differences in capital structure between banks that have a great return on assets and those that have a little return on assets.

The Mann-Whitney U test results indicated that $Z (-2.070)$ is significant at 5%, and accordingly, the null hypothesis is rejected and as a result, the alternative hypothesis, which states that there are significant differences in the capital structure between banks that have a great return on assets and those that have a little return on assets, is accepted. As for the other hypotheses, the results showed.

6 Recommendations

Based on the findings of the current study, the researchers would like to suggest the following recommendations.

Decision makers and interested people should spare no efforts to develop a culture and mechanisms for dealing with financial performance indicators, show the danger of its absence, and highlight its negative repercussions.

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ESG Policies for Financial Institutions: Comparative Studies Between Malaysia, United Arab Emirates and United Kingdom

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Abstract. Environmental, social and governance (ESG) practices are imperative to all stakeholders in the financial institutions. Good ESG performance is vital in mitigating financial risk and encouraging financial institutions' commitment towards good governance and environmental practices. It could reduce the financial uncertainty when the financial institutions are committed towards reducing the risks associated with ESG matters. The ESG factors and climate change are now being acknowledged as one of the major threats to the financial stability of the financial institutions and the countries. In response, the authorities are actively working towards establishment of robust regulatory frameworks and policies to strengthen the ESG adoption as well as its implementation in all financial institutions. In this paper, three countries have been selected namely Malaysia, United Arab Emirates (UAE) and the United Kingdom (UK) to examine their countries' ESG policies for financial institutions and further provide comparative analysis on its adequacy. This comparative study between these countries is necessary to recognize and identify the differences and pinpoint the progression stage in each country. Based on the analysis, Malaysia and the United Kingdom have more comprehensive and exhaustive ESG policies as compared to the United Arab Emirates.

Keywords: ESG · UAE · UK · Malaysia · Regulatory framework · ESG policies

1 Introduction

Financial Institutions (FIs) play a vital role in the society serving as intermediaries bridging the household spendings with the deficit units in the economy (Scholten and van's Klooster 2019). However, the role of FIs is not limited to serve only as financial intermediaries between the surplus and deficit units in the economy but also as the main players in the financial sectors. Along with the climate change initiatives, SDG goals and ESG, the aim for a sustainable finance is becoming more certain and achievable (De Franco et al. 2021).

Throughout the years, contributions of financial sectors towards climate change and SDG targets are undeniably large. It is anticipated that trillions of dollars would need to be invested globally to combat climate change, with infrastructure spending alone needing nearly \$6 trillion year by 2030 (IMF 2019). The aim of zero net-carbon emission by 2050 proposed by the United Nations, along with the Paris Agreement treaty of which all three chosen countries in this paper were a member of, had boosted the worldwide effort for more positive and greener finance initiatives (UNFCC 2022). Globally, each country had different approaches and strategies in their economic transitions towards sustainable finance that is much more ESG and SDG-related. While the economic approach taken upon the government or corporate entities such as the issuance of green sukuk and bonds are important from an economic perspective, the regulatory approach is also important. A proper and holistic approach by the related bodies in adopting global recommendations in their by-laws will result in a resilient and sustainable governance.

Continuously being ranked first in global Islamic economy indicator report had made Malaysia to be globally recognized and being referred to in terms of having a strong and developed Islamic Finance governance framework (Islamic Finance Development Report - Refinitiv 2021). With the great reputation being held by Malaysia in the category made Malaysia among the countries that is under the attention for its ESG related policies and initiatives. United Arab Emirates (UAE) had also been progressing in their Islamic Finance development that it had successfully marked its place in top three ranking of the development in its Islamic Finance governance. Apart from that, UAE is also has been leading in ESG related initiatives in the Middle East and North Africa Regions (MENA) (Martini 2022). While UK, has also being recognized as leading country in green financing initiatives and is also part of commonwealth country practicing common law that is the same being practiced in Malaysia. Therefore, the comparison between Malaysia and UK in their regulatory adoption with the international standard and recommendations are always being eyed to.

2 Research Methodology

This study applies doctrinal legal research and adopts a qualitative study using the content analysis approach. The data used for this research are mainly from the relevant regulatory reports of each selected countries (Malaysia-UK-UAE) on their ESG policies including sustainable finance and financial climate change policies. These policy reports are extracted from the official websites of the regulatory authorities responsible for the issuance of the reports. These resources are analysed critically to examine the countries' efforts towards establishing ESG related policies for their financial institutions and to analytically compare the ESG policies between them for the purpose of recommending the way forward for the respective countries.

3 Literature Review

3.1 Regulatory Initiatives on ESG in Each Country

Malaysia. As of November 2019, approximately 11.7% of Malaysian financial players' assets were in sectors potentially vulnerable to climate change. It is a logical step for

Malaysian FIs to take in managing climate risk as they construct and prepare a more sustainable and climate-resilient Malaysian financial system. The Bank Negara Malaysia (BNM) has gradually addressed climate risk since 2019 in order to establish the foundations for a strong framework in climate risk management for the financial sector. As the central bank of Malaysia, one of its objectives is to establish proper regulations and oversight to make sure that FIs are properly assessing, mitigating, and buffering against climate risks associated with various efforts in Malaysia.

In an effort to improve the financial sector's climate resilience, authorities and industry participants formed JC3 in September 2019. BNM, the Securities Commission, Bursa Malaysia, and 21 business players make up JC3. The JC3 necessitates the growth of capacity through the sharing of information, experience, and best practices in evaluating and managing climate-related risks, identifying issues, challenges, and priorities confronting the financial sector in managing the transition to a low-carbon economy, promoting cooperation among stakeholders in pushing coordinated solutions to meet emerging challenges and issues, and aiding the financial sector in integrating identified solutions. The JC3's five subcommittees—Risk Management, Governance and Disclosure, Product and Innovation, Engagement and Capacity Building, and Bridging Data Gaps—undertake its activities and priorities.

Next, BNM introduced Value-based Intermediation Financing and Investment Impact Assessment Framework in November 2019. The document's goals included facilitating the implementation of an impact-based risk management system for assessing Islamic financial institutions' financing and investment activities in accordance with their respective VBI commitments, as well as serving as a reference for other FIs looking to incorporate ESG risk considerations into their own risk management system (Value-based Intermediation Financing and Investment Impact Assessment Framework - Guidance Document - BNM 2019).

The Bank later issued CCPT on April 15, 2021 that offers a framework and guidelines to aid in the transfer of economic activities that do not contribute to the goals of combating climate change. Besides, the Bank further published Climate Risk Management and Scenario Analysis, Exposure Draft on December 27, 2021. In order to increase the financial sector's resilience to climate-related risks and allow a smooth transition to a low-carbon economy, the proposed particular standards and expectations specified in this exposure draft are meant to be implemented by FIs.

Recently, following the formation of JC3, in order to help Malaysian FIs adopt climate-related disclosures gradually and to speed up efforts to manage climate-related risks and opportunities, JC3 released the TCFD Application Guide for Malaysian FIs on June 29, 2022 (JC3 Issues the TCFD Application Guide for Malaysian Financial Institutions - Bank Negara Malaysia 2022).

United Arab Emirates. In the meanwhile, as the global financial center, the UAE is committed towards addressing opportunities and risks associated with climate change impacts and ESG through issuance of regulatory frameworks and policies focusing on sustainable finance. These efforts have been implemented across all sectors in UAE and have got active response from both Dubai Financial Services Authority in Dubai as well as Financial Services Authority in Abu Dhabi. Active roles played by these two prominent financial regulatory institutions have enabled and smoothen the development

of sustainable finance in the UAE. In addition, active involvement from ministries in UAE such as the Ministry of Climate Change and Environment has further pushed the significant role of sustainable finance in addressing the current issues presented by climate change and ESG.

One of the ‘sustainability’ policies being introduced by the UAE government is The UAE Green Agenda 2015–2030. This 15 years plan aimed to establish the UAE as a sustainable global hub with five key objectives and goals aimed at encouraging the financial sector to invest in green projects, financial products and services (UAE Green Agenda 2015). Apart from that, UAE Ministry of Climate Change and Environment (MOCCE) also plays significant role in supporting sustainable finance through issuance of its Sustainable Finance Framework 2021–2031 with the aim to create a more conducive environment for innovative sustainable product development as well as supportive use of private capital in investments that are more environmentally sustainable and climate resilient.

Three key pillars have been developed under this framework which include the incorporating of sustainability in the companies’ decision-making process and risk management, increasing supply and demand for sustainable finance products and green investment projects as well as providing conducive and enabling environment that promotes sustainable finance practices through collaboration between financial and sector stakeholders (UAE MOCCE 2021). Furthermore, the UAE regulatory authorities’ efforts to ensure sustainable finance are also reflected in the Abu Dhabi Sustainable Finance Declaration 2019, which aims to encourage green and sustainable investment in Abu Dhabi, the UAE, and the wider MENA region. (“The Abu Dhabi Sustainable Finance Declaration,” 2021). The Framework was later adopted by the UAE government, regulators and local as well as international UAE companies.

United Kingdom. On the contrary, the United Kingdom and England used a very exhaustive approach in strategizing their transition towards ESG-aligned initiatives. The formation of a solid regulatory framework by the government and related authorities such as the UK Financial Conduct Authority (UK FCA) has gone through rigorous steps before it is finally implemented to the industry. UK has long before played a critical role in fostering growth and establishing the green finance agenda and was also the first country in the world to formally incorporate the carbon reduction goals into their regulatory framework through the adoption of the Climate Change Act 2008 by the United Kingdom Parliament (Green Finance Strategy 2019).

In November 2020, the then Chancellor of Exchequer had announced the commitment of the nation to make the climate-risk disclosures entirely mandatory across the economy, making the UK the first government in the world to do so (HM Treasury 2021). Following the announcement, FCA as the regulatory body had actively played their role in integrating the climate-risk disclosures into their standards and guidelines. As such, immediately in December 2020 FCA issued a policy statement requiring the UK premium listed companies to include some climate-related disclosures in their annual financial reports, or to explain why they have not (PS20/17 | FCA 2020).

In November 2021, the FCA had released a comprehensive strategy document titled ‘A strategy for positive change: our ESG priorities’. In the strategy document, it had outlined the freshened ESG strategies setting out further plan on the better delivery on

the target ESG-related outcomes (A Strategy for Positive Change: Our ESG Priorities | FCA 2022) (Table 1).

Table 1. The table shows the summarized list of ESG related policies introduced by each country

	Malaysia	United Arab Emirates	United Kingdom
Establishment of Taxonomy	CCPT issued on 15 April 2021	Not yet established	UK Green Taxonomy
Task Force and Climate-Change Financial Disclosure (TCFD)	JC3 released TCFD Application Guide for Malaysian Financial Institutions	No specific national TCFD application guide introduced by the regulatory authorities	TCFD-aligned disclosure rules
Regulatory Initiatives on ESG	<ul style="list-style-type: none"> • JC3 was founded • VBIAF • CCPT • Climate Risk Management and Scenario Analysis, Exposure Draft • TCFD Application Guide for Malaysian Financial Institution 	<ul style="list-style-type: none"> • UAE Green Agenda 2015–2030 • Sustainable Finance Framework 2021–2031 • Abu Dhabi Sustainable Finance Declaration 2019 	<ul style="list-style-type: none"> • UK FCA ESG Handbook • UK FCA Strategy Document: ESG Priorities • UK FCA Discussion Paper on Sustainability Disclosure Requirement
Emphasis on Maqasid Al-Shariah in ESG-related regulatory framework	Discussed and embedded in VBI and VBIAF	Neither specific policy nor express term of Maqasid al-Shariah being used in the UAE sustainable finance policies	Neither specific policy nor express term of Maqasid al-Shariah being used in the UK sustainable finance policies

3.2 Establishment of ESG-Aligned Taxonomy

ESG-Aligned Taxonomy in Malaysia. In Malaysia, the authority through BNM has introduced Climate Change and Principle-based Taxonomy (CCPT) which embedded five guiding principles focusing on the existing and prospective customers. CCPT was established to guide FIs to ensure their economic activities meet climate objectives; and to promote the transition to a low-carbon economy (Climate Change and Principle-based Taxonomy - Bank Negara Malaysia 2021). CCPT came into effect on 30 April 2021.

The first principle is climate change mitigation where the objective is to help FIs have economic activities that avoid, limit and enable others to avoid and limit the amount of greenhouse gas (GHG) emitted into the atmosphere or put a stop on it. CCPT further laid down a few examples in applying this principle such as International Financial

Institutions approach GHG accounting in wind power generation projects that aids in reducing the emission of Carbon dioxide into the environment. Following this, CCPT guides FIs implement measures and actions to lower the negative effects and/or escalate resilience to tolerate and endure existing or coming climate change effects. This makes climate change adaptation as the second principle in CCPT.

Next, the third principle is no significant harm to the environment because unintended harm to the wider ecosystem may occur while the first two guiding principles are applied. Specifically, the FIs are expected to engage in economic activities that prevent, reduce and control pollution on the nature, protect healthy ecosystems and biodiversity and use natural resources in a livable and coherent manner (Environmental Quality Act 1974 (ACT 127), Regulations, Rules & Orders 2018). Hence, remedial measures to transition become the fourth guiding principle that intends to foster a smooth transition by eliminating any obvious exclusion of existing economic activities that are not complementing the target of combating climate change and/or are not sustainable.

The last guiding principle is prohibited activities. Among the existing environmental laws that the economic activity should be in line with are, included but not limited to National Forestry Act 1984, Wildlife Conservation Act 2010, National Parks Act 1980, Fisheries Act 1985, Environmental Quality Act 1974, Employment Act 1955, Children and Young Persons (Employment Act 1966) and Minimum Wages Order 2018.

ESG-Aligned Taxonomy in United Arab Emirates. Unlike in Malaysia, the UAE is yet to establish its specific sustainable finance taxonomy. Nevertheless, its importance is highlighted in the Guiding Principles on Sustainable Finance (GPSF) in UAE, introduced in January 2020, in the second principle. The GPSF is based on the United Nations Agenda for Sustainable Development, and they serve as a guide to implement and integrate consistent sustainable practices in UAE financial entities, including banks (ADGM 2020). The GPSF was developed by the Abu Dhabi Global Market (ADGM) and was the first collaboration between ten (10) financial regulators and exchanges, ministries and environmental bodies in UAE (the Authorities) including its central bank.

The second Principle emphasizes on the minimum eligibility requirements of what constitute 'sustainable' financial products or instruments. Under this principle, the Authorities do recognize the importance of adopting certain common terminology (a taxonomy) and minimum eligibility requirement of what is regarded as 'sustainable'. Nonetheless, since the Authorities are yet to develop its own taxonomy and there is no other national taxonomy on sustainable finance in UAE, the Principle encourage the adoption of internationally recognized taxonomies for 'sustainable' and 'green' products and instruments such as Principles for Responsible Banking (UNEP Finance Initiative 2019) and the European Commission Action Plan on Sustainable Finance (European Commission 2018). If the financial institutions intend to adopt 'sustainable' criteria other than the established taxonomies, they must disclose the departure and reason for the adoption to all relevant parties (ADGM 2020).

The GPSF consists of three Principles. The first Guiding Principle focuses on the institutions' overall responsibility to incorporate ESG factors into their risk management, governance and strategy. This can be done by the FIs identifying and considering opportunities, risks and threats afforded by ESG compliant investing as well as to exercise high level due diligence in lending and investment decisions (ADGM 2020). The next

step is for the FIs to incorporate such opportunities and risks into business strategy and financial planning at all levels of the organization. Lastly, the FIs need to enhance their ESG performance through suitable product development and to promote sustainability in all activities conducted inside the organization (ADGM 2020). This first principle also emphasizes the role of the Board of Directors and senior management as top management in incorporating ESG considerations into the institution's governance.

The third principle is on the promotion of appropriate ESG related reporting and disclosures. Disclosure on ESG matters promotes greater transparency to the relevant stakeholders. It allows them to assess the FIs' ability in managing and adapting with ESG related issues, fulfilling obligations under ESG and ability to meet their financial obligation. The principle also emphasizes on the need for the ESG specific risks, processes, initiatives and performance to be reported in parallel with international recognized reporting standards on ESG matters as well as to be consistent with national disclosure obligations (ADGM 2020).

ESG-Aligned Taxonomy in United Kingdom. The United Kingdom (UK) has taken highly significant steps to advance towards ESG initiatives in the financial sectors. While Malaysia has VBIAF and UAE has Sustainable Finance as one of their ESG strategy approaches, the same techniques had also been adopted by the UK since years back with the Green Financing initiatives. While the Green Financing Strategy focused generally on climate change approaches, in recent years, the UK government had updated its Green Finance Strategy to also include a portion of ESG initiatives especially in the disclosure requirements (Green Finance Strategy 2019).

However, with the exhaustive approach used by UK in adopting ESG related initiatives means that until now, there is no specific ESG related taxonomy or even UK Green Taxonomy issued by the government yet as the discussion still ongoing before it is to be fully designed and ready to be implemented (UK GTAG 2022). Even with no specific issued ESG-related taxonomy yet, The UK Financial Conduct Authority (UK FCA), an independent regulatory body that oversees all financial matters in the UK, has actively taken progressive steps to issue and update its rules and regulations to incorporate ESG initiatives and priorities. This is in addition to the UK government's inclusion of ESG-related initiatives in its national Green Financing Strategy.

As such, UK FCA had issued a strategy document titled "A strategy for positive change: our ESG priorities," in which presented a detailed approach and updated ESG strategies taken up by UK FCA, including further plans for better achieving the desired ESG-related goals (A Strategy for Positive Change: Our ESG Priorities | FCA 2022). Besides that, UK FCA also issued a number of discussion paper and policy statements incorporating ESG related disclosures to further expand their exhaustive regulatory approach in ESG related initiatives such as UK FCA Discussion paper on Sustainability Disclosure Requirements and investment labels and Policy Statement on enhancing disclosure to be extended to life insurers, asset managers and pension providers (Hancock et al. 2022).

In addition, the FCA implemented new Listing Rules in April 2022 that require issuers to publish a statement in their annual financial report outlining whether they have fulfilled particular board diversity targets. This is in relation to diversity and inclusion. Additionally, continuous disclosure duties result from, among other things, the Market

Abuse Regulation. The FCA has stated that since many issuers' assets are financially relevant to risks and opportunities related to climate change, information regarding them may constitute insider information and must be disclosed (FCA 2022).

3.3 The Task Force on Climate-Related Financial Disclosures (TCFD)

TCFD-Aligned Initiatives in Malaysia. In Malaysia, the Joint Committee on Climate Change (JC3) issued the Task Force on Climate-related Financial Disclosures ("TCFD") Application Guide for Malaysian Financial Institutions in June 2022, which explains critical recommendations includes pertinent justifications, instructions, suggestions, and illustrations that can be utilized as beneficial materials to aid the Malaysian FIs adoption of the TCFD Recommendations. This policy was divided into four categories: governance, strategy, risk management, and metrics and targets. According to their exposure to climate risk and operational complexity, all FIs will adhere to the basic recommendations stated in the Application Guide and are urged to adopt stretch recommendations.

To begin, TCFD encourages companies to disclose their climate governance in stages. In the early stages, FIs may highlight the boards' sustainability credentials, disclose sustainability capacity building for board members and management, and reveal core features such the board's oversight and management's participation in assessing and managing climate-related challenges. FIs may think about creating a distinct climate-related committee, exposing discussions about climate change during board meetings, and incorporating sustainability into the board's and top management's key performance indicators (KPIs) in the ensuing phase.

Second, disclosures about strategies should include information about the kind, magnitude/amount, and duration of exposure to significant climate issues, as well as the potential results/effects of climate-related risks and opportunities. Identifying climate risks and opportunities is the first step for FIs, which should then evaluate how such risks and opportunities influence their business strategy and performances before disclosing their climate risk strategy and risk attitude. FIs with advanced capabilities may analyze climate scenarios to make sure their values and business strategy are aligned with the climate. Subsequently, the present risk management procedures used by FIs should include climate-related risks by disclosing how it identifies, assesses, and characterizes climate-related risks, measures, monitors, manages, including decision-making in mitigating, transferring, accepting, or controlling them, and reports them.

And at last, as part of their efforts to decarbonize their financing or investment portfolios, FIs should implement climate-related metrics and targets. In order to effectively connect the aforementioned TCFD key aspects and their corresponding recommended disclosures, as well as their performance and transition plan, these metrics and targets should be created in such a manner that they both inform and are informed by the institution's governance, strategy, and risk management processes.

TCFD-Aligned Initiatives in United Arab Emirates. While Malaysia already has its own TCFD Application Guide, UAE is yet to develop its own TCFD guidance. Nevertheless, in respect of sustainability disclosure, the UAE through the UAE Sustainable Finance Working Group (SFWG) has encouraged and emphasized such disclosure to

be implemented across UAE financial institutions. Rigorous efforts on setting up UAE own's TCFD application guide have been highlighted by its working group such as UAE SFWG.

The UAE SFWG in its Statement on Sustainable Finance issued in November 2021, has outlined a roadmap on sustainable finance specifying the UAE SFWG's journey towards achieving sustainable finance. The roadmap consists of three deliverables which includes: 1) examine the implementation of corporate disclosure standards across the UAE; 2) encourage companies to practice good corporate governance and 3) establish a UAE taxonomy of sustainable activities, which is critical for the UAE's long-term economic transition ("UAE Regulators and Exchanges Issue High-Level Statement on Sustainable Finance," 2022).

With regard to the first deliverable, the SFWG aimed to strengthen the ESG corporate disclosure standards across UAE to be parallel with UAE national and international best practices. It was stressed out that corporate disclosure on the sustainability risks by the companies are required to enable relevant investors and stakeholders to evaluate the company's long-value creation and sustainability risk exposure. This step would further promote the company's transparency towards its customers, investors and other relevant stakeholders in terms of their management on the sustainability risks and opportunities. This deliverable signifies the effort taken by UAE to ensure ESG disclosure regardless of the absence of national TCFD guidance.

For the second deliverable, the SFWG aimed to examine current corporate governance standards and practices in order to incorporate sustainability into UAE corporate governance structures. Meanwhile, for the third deliverable, the proposed taxonomy will provide a clear guidance on which activities that can be classified and considered as 'sustainable' (UAE Regulators and Exchanges Issue High-Level Statement on Sustainable Finance 2022). In this respect, an effective allocation of funds into selected sectors for sustainability purposes could be achieved as a result of clear guidance of taxonomy.

In addition, effort towards developing standardized guidance on ESG and climate related reporting and disclosure at the UAE national level is also reflected in the First Pillar of UAE Sustainable Finance Framework 2021–2031, introduced by its MOCCE (UAE MOCCE 2021). The recommendation on establishing this standardized ESG disclosure also emphasizes for its practices or guidelines to be aligned with TCFD Recommendations.

TCFD-Aligned Initiatives in United Kingdom. On the other hand, the ESG-aligned approach taken by the United Kingdom such as the formation of the UK Green Taxonomy heavily relied on the FSB TCFD recommendations. As such, the UK Green Taxonomy will serve as a framework for Sustainability Disclosure Requirements (SDR), defining the criteria on certain economic activities which must be fulfilled in order to be considered ecologically sustainable and 'Taxonomy-aligned' (Green Finance Strategy 2019).

In July 2021, in the Mansion House Speech the then Chancellor Rishi Sunak announced new Sustainability Disclosure Requirements (SDR). SDR will provide an integrated framework for decision-useful sustainability disclosures across the economy (HM Treasury 2021). For the first time, it will bring together existing sustainability-related disclosure obligations under one integrated framework based on leading

worldwide standards and best practice, and it will go even farther with additional requirements.

3.4 Emphasis on Maqasid Al-Shariah in Sustainable Finance Framework

Malaysia. In collaboration with the VBI Community of Practitioners (CoP), Bank Negara Malaysia finalised and released its Strategy Paper on Value-based Intermediation (VBI) in March 2018. VBI is described as a role and contribution that seeks to reorient Islamic finance business models toward realising Shariah objectives that provide good and sustainable impacts on the economy, community, and environment through practises, procedures, products, and behaviour compatible with the shareholders' sustainable returns and long-term interests. Beyond merely adhering to Shariah regulations, VBI encourages a more comprehensive observation of Shariah, making sure that Islamic banking offers and practises not only do so but also meet the goals set forth in Shariah.

In VBI, among the proposed underpinning thrust that embedded the concept of Maqasid Al-Shariah is good self-governance that incorporate the principle of consultation (*istisharah*) that improves perspective, understanding, and expectations for Islamic banking institutions (IBI) that will influence or determine the outcome of their business plans and principles of righteousness (*ihsan*) and as a result of the common moral outlook for the ultimate good, the IBI would be held to a higher standard of accountability and integrity. In order to safeguard the interests of the contractual parties, IBI is furthermore obliged to develop methods that enhance its services, procedures, and interactions with its stakeholders while still being somewhat compliant with Shariah law.

Meanwhile in VBIAF, the principle of attainment of benefit and prevention of harm is in line with the goal of Shariah. According to this concept, Islamic financial institutions (IFI) are required to describe their methodology for assessing the benefits and risks of any financing and investing activities. The implementation of Shariah is consistent with this concept, which is ingrained in the demands of Islam. The Quran and Islamic teachings, which expressly endow people with the custodianship of the earth's resources and set out specific rights and guidelines for human social interactions and activities, provide a clear definition of "vicegerency" on the earth.

The integration of Shariah is another principle covered by VBIAF. IFI specifies how it will incorporate Shariah into its business strategy and operational design in a way that goes beyond compliance to actually alter IFI. Instead of creating a Shariah checklist that focuses on exceptions, policy and procedure design as well as capacity development should attempt to enable a Shariah mindset that focuses on effect.

United Arab Emirates and United Kingdom. Contrastingly, both UAE and UK do not have any specific national ESG policies developed based on Maqasid al-Shariah. Nevertheless, the elements of Maqasid al-Shariah that encompasses *Daruriyyah*, *Hajjiyyat* and *Tahsiniyyat* are indirectly incorporated in the UAE and UK sustainable policies. This is because sustainable finance does not only benefit this planet but also the lives in it. Sustainable finance is aimed at protecting lives through social impact financing, environmental preservation and conservation for future use and others. Despite the absence of a specific term of 'Maqasid al-Shariah' being mentioned clearly in the UAE policies,

the Guiding Principle on Sustainable Finance in the UAE has emphasised that all the principles introduced have taken into consideration Shariah law requirements, principles and guidelines.

4 Findings and Discussion

Malaysia is still in the early stages of implementing and adopting ESG standards, but it is outperforming its ASEAN peers. The country has made significant progress in terms of policy and regulatory activities pertaining to sustainability risk management and disclosures, the development of the sustainability index, and the implementation of sustainability finance. Furthermore, being one of the top IF countries, Malaysia has developed an ESG policy for IFIs that incorporates Maqasid Al-Shariah. While Malaysia is doing reasonably well in comparison to other ASEAN countries, sustainability is a journey rather than a destination. Malaysia is still establishing these rules and innovations, which bodes well for the advancement of ESG in Malaysia.

With a strong regulatory environment and considerable government initiatives, the UK has been taking a more thorough and all-encompassing approach to improving the implementation of the nation's ESG strategy. However, because the technique calls for extensive discussions and the instillation of confidence and commitment among stakeholders, delays may be the most important issue and hurdle in terms of execution.

UAE progressive commitment towards issuing ESG policies for financial sectors can be seen through the establishment of the country's national policies aimed at incorporating ESG elements into the companies' management, operational frameworks, business operation and investment across all sectors. Nevertheless, ESG policies for the UAE financial institutions are still developing like in Malaysia and the UK.

Presently, there are no independent policies and regulations introduced solely from the UAE Central Bank. Most of the ESG policies for the financial institutions issued are collaborative efforts from numerous regulatory authorities including ministries, stock exchanges, financial services and the Central Bank of UAE. This is reflected through the issuance of the first of its kind in the UAE, the Guiding Principles on Sustainable Finance in the UAE 2020. Nonetheless, it is expected that the UAE's current supportive regulatory environment on sustainable finance will push the country's Central Bank and other authorities toward a comprehensive and robust regulatory framework.

It is observed that UAE and UK policies on sustainable finance taxonomy and TCFD Recommendations are not yet established. There are no specific national policy guidelines on TCFD Recommendations unlike in Malaysia. Nevertheless, encouragement on ESG and financial climate-related disclosure and reporting has been made clear through its Guiding Principles on Sustainable Finance in the UAE 2020 and in UK FCA policy statement on enhancing UK TCFD aligned disclosures in the company's annual report (PS20/17 | UK FCA 2020).

Apart from that, UAE and UK have yet to establish its own national taxonomy on sustainable finance. In contrast, Malaysia has already established their own national taxonomy namely CCPT 2021 and UK Green Taxonomy respectively. Despite that, the UAE and UK are continuously putting effort towards developing their own national

taxonomy. In addition, unlike the Malaysian VBI and VBIAF that expressly use the term of Maqasid al-Shariah, UAE and UK does not have specific sustainable finance policies that are based on the intended outcome of Shariah. Nevertheless, the word ‘Shariah requirements, principles and guidelines’ have been used in the Guiding Principles on Sustainable Finance in the UAE, specifying that the principles introduced are based on those Shariah requirements. Thus, it is applicable to both Islamic and conventional financial institutions.

5 Conclusion and Recommendation

The progress in implementing and adapting ESG practices has certainly been made noteworthy in Malaysia, UAE and the UK. However, it is still a long path for the countries to have strong policies and regulatory framework. Having said that, a mind frame and viewpoint transition is important to steer financial institutions in the respective countries toward self-regulation and better internalization of sustainable practices and adoption of ESG principles.

With each of the countries preparing to implement the ideas and strategy moving forward after the discussions and consultations are through and the shareholders’ commitment has been confirmed. Depending on how well-suited their strategy is to embracing ESG-aligned activities and green finance, the countries can choose the model. Therefore, to ensure that sustainability is at the heart of business strategies and operations, boards and management must be made aware of their role and participation. As a result, it is vital that each financial institution have ESG-competent boards and directors.

This paper concludes that all the three countries are committed towards issuance of ESG policies for their countries’ financial institutions. This can be observed through the issuance of various countries’ ESG policies for the good ESG performance of the financial institutions. Nevertheless, most of the policies are focusing on the ‘E’- environment and ‘G’- governance and less emphasis on the ‘S’- social.

Hence, this paper emphasizes on the need for the policies issuance to be balanced between E, S and G respectively. In addition, it can be observed that Malaysia and the UK have more comprehensive policies on ESG for financial institutions as compared to UAE. The absence of UAE’s own taxonomy on sustainable finance and national guideline application on TCFD need to be resolved quickly so that the financial players in the industry can take proactive steps in pursuing sustainable investment and enhancing transparency through sustainability disclosure.

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Accounting for Climate Change in Light of the IFRS Foundation Movements: A Systematic Review and Future Research Agenda

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Abstract. Motivated by the growing demands for global sustainability and climate change disclosure practices, this review article intends to primarily explore the emerging trends of climate change related disclosures in light of the recent initiatives of IFRS Foundation by epitomizing and mapping the perspectives of prior literature. Hence, this study is a literature review in nature. In this vein, 27 research articles published during 2020–2022 in high-quality academic journals are randomly selected for the analysis. The reviewing process was restricted to the academic papers available in the leading databases, namely, Scopus, Web of Science, Chartered Association of Business Schools (hereafter ABS), and Australian Business Deans Council (hereafter ABDC). In this context, to generate a profound knowledge, this research casts the light solely on prior studies that published after a while of proclaiming the consultation paper on sustainability reporting by the IFRS Foundation “In September 2020”. The findings reveal that the overwhelming majority of the analyzed papers used empirical techniques. Furthermore, the results unveil that the most widely keywords were climate change, carbon reporting/disclosure, greenhouse gas disclosure corporate climate change disclosure respectively. For future research directions, the analyzed papers suggest further indirect investigations of the effect of board diversity, professional shareholders, audit committee, green innovation, cost of capital on climate change related disclosures. Accordingly, the study findings provide multidimensional insights for future researchers to bridge the gaps in the current literature.

Keywords: Accounting for climate change · Climate change disclosure · Carbon disclosure · Greenhouse gas disclosure · Climate risk disclosure · IFRS Foundation

1 Introduction

During recent years, climate change and global warming have emerged as the most remarkable global environmental issues (Daradkeh et al. 2022). In this context, climate change has encountered dramatical and global growing concerns as a phenomenon

reflects the influence of the firms' activities on the environment, society, and economy. In the strict sense of word, the chronic and forked changes in climate patterns will have socio-economic effects (Huiskamp et al. 2022). Consequently, firms are continuously pressured by different parties of stakeholders to disclose information on their activities and actions that affect climate change (Shen et al. 2020).

Considering the aforementioned, academic scholars have casted a considerable light and massive attention to investigate climate-change related topics in various fields. Notwithstanding, this contemporary topic attract the accounting researchers for further investigation to explore the impact of climate change on firms' accounting behavior (see, Guo et al. 2022; Gulluscio et al. 2020; de Grosbois and Fennell 2022; Panfilo and Krasodomska 2022; Maji and Kalita 2022; Lin and Wu 2022; Attenborough 2022).

From an accounting disclosure context, there is a deeply-rooted practices of climate change reporting in the overwhelming majority of countries worldwide. The underlying logic stands behind these practices is to communicate sustainability information to a wide range of stakeholders. In this sense, reporting on climate related information enables entities to distinctly understand the challenges they face and expedite the adaption to climate change, and therefore mitigating the potential for future business disruption (O'Dwyer and Unerman 2020). Climate change affects the business environment, and firms need future oriented information to build climate resilience (Huiskamp et al. 2022).

Moving to the global initiative on setting climate disclosure standards, the Financial Stability Board (FSB) launched a global initiative, the Task Force on Climate-related Financial Disclosures (TCFD) to improve and upgrade reporting of climate-related financial information by developing consistent climate-related risk reporting recommendations (Demaria and Rigot 2021). From the international framework, the Paris Agreement was launched and adopted in 2015. This agreement entered into force in 2016, and purposes to strengthen the global response to the threat and detrimental effects of climate change, in the context of sustainable development (United Nation 2015).

Moreover, in September 2020, the IFRS Foundation issued the consultation paper on sustainability reporting which handled sustainability disclosure and whether there is a need for global set of sustainability reporting standards (IFRS Foundation 2020). More importantly, in November 2021, as the world leaders meet in the UN Climate Change Conference in Glasgow (COP26), the UN global summit to overcome the sensitive and urgent issue of climate change (European Parliament 2021). As consequence, the publication of prototype general requirements for disclosure of sustainability-related financial information and climate-related disclosure¹ were issued by the Technical Readiness Working Group (TRWG), a group formed by the IFRS Foundation Trustees to undertake preparatory work for the ISSB (IFRS Foundation 2021a; IFRS Foundation 2021b).

The contribution to knowledge of this review research provides fruitful insights into corporate's climate change disclosure literature. *First*, to the best of the author knowledge, this is the only literature review study that sheds the light onto the progress in setting reporting standards of climate-related matters by running a systematic review of the academic papers, which are published after a while of proclaiming the consultation

¹ In March 2022, the ISSB released two exposure drafts for public comment due July 29, 2022. (i) IFRS S1-General Requirements for Disclosure of Sustainability-related Financial Information. (ii) IFRS S2-Climate-related disclosures.

paper on sustainability reporting by the IFRS Foundation “September 2020”. **Second**, a stream of recent calls (see, Shui et al. 2022; IFRS Foundatio2020) arouses by ESG organizations and prior researchers worldwide perspicuously unveil that the current situation needs to develop a unified set of global reporting standards for managing climate change risks, therefore this current study well responds to the more recent calls presented by ancestors. **Third**, the current literature on climate-related disclosures has been struggled to provide a cogent summary of the prior works and the most critical issues experiences in paving the way for reporting of climate-related matters.

In light of the aforesaid, this study primarily purposes to fulfil these principal objectives: **First**, to provide a coherent view of what has been done in climate change disclosures and what the challenges remain ahead. **Second**, propose future research avenues, which, in turn, help to open the black box of corporate climate change disclosure.

The rest of this review article is organized as follows. Section 2 presents the research methodology. Section 3 outlines the literature search approach. Section 4 provides explanation about the data collection. Section 5 reports the study findings and discussion. The conclusions and future research agenda are given in the final section.

2 Research Methodology

From an analytical standpoint, a systematic literature review of a random sample of published prior works “academic papers, ESG organizations’ reports, and leading accounting firms in the globe” has been done. The systematic literature review provides holistic and unbiased synthesis of large number of prior studies within solely one research document. More importantly, the light has been casted on works published during the period of time “2020–2022”. The entrenched logic behind the selection of these years was motivated by the following points: (1) the globe has witnessed a burgeoning movements and initiatives towards sustainability-related matters, particularly the urgent demands of high-quality reporting on climate change issues. (2) the globe needs for a common language to measure and report on sustainability issues by setting a unified set of high-quality sustainability standards. (3) the widespread of climate change dangers in popular press.

3 Literature Search Approach

Following Gil-Marín et al. (2022), a prior literature search was conducted in rigors manner, the reviewing process was restricted to the academic papers available in the leading databases, namely, Scopus, Web of Science, (ABS), and (ABDC). More minutely, the search has been included all articles published in academic journals indexed in Scopus, Social Science Citation Index (SSCI), Science Citation Index Expanded (SCIE), Emerging Sources Citation Index (ESCI), (ABS), and (ABDC). Beyond that, and following Koutoupis et al. (2021), the author also included prior studies not listed in aforementioned databases when they were heavily cited by other researchers. Furthermore, to generate solid and sturdy findings, Table 1 presents a set of keywords and search strings used by the author for search process:

Table 1. Keywords used to identify articles on climate change-related matters

1	Climate change disclosure/reporting
2	Climate change risk
3	IFRS and climate change-related disclosure
4	Greenhouse gas/greenhouse gas disclosure
5	Global warming
6	CO ₂ emissions/Carbon emissions
7	Carbon disclosure

4 Data Collection

The keywords were entered into the selected databases. Afterwards, the publication timespan was restricted to the period of time for each keyword “2020–2022”. The author used 2020, as the starting year of the analysis in this period of time. The underlying logic stands behind the starting year is that in September 2020, the IFRS Foundation has announced the consultation paper on sustainability reporting. More importantly, only peer-reviewed studies in English were included in the review.

Given the aforesaid processes and to meet the objectives of this review study, the searched studies have been initially scrutinized by the author based on four criteria “title, abstract, key objectives, related field of knowledge, keywords”. As a consequence, to generate solid findings, a stream of prior studies has been dropped. To mitigate selection bias, a simple random sample was used, in which sample is chosen strictly randomly. This approach provides equal odds for each paper of the population to be chosen. In this context, and after the scrutinizing steps, the number of research papers that formed the final sample was 27 articles² published in 22 journals, which included in the systematic review in this current study.

5 Results and Discussion

5.1 Overview of the Literature

As shown in Table 2, the crushing majority of journals of reviewed papers are indexed in Scopus, Web of Science, ABS, and ABDC databases. Moreover, in terms of publisher distribution, the findings of the analysis reveal that approximately 37% of the sample research papers was published by “Wiley”, followed by “Emerald” 18.5%. Moving to the publication timespan, the findings unveil that the overwhelming majority of articles covered in this literature analysis published in 2022.

² The primary sources used by the author of the 27 reviews (research papers) are listed in Table 11 and presented in the appendix.

5.2 Content Analysis

This subsection presents a comprehensive set of content analysis of 27 selected articles. More specifically, the analysis is performed according to database distribution, journal and publisher distribution, year of publication, keywords, research methods, author's affiliation, and future research opportunities. In this context, to accomplish the study purposes, the following subsections present each theme in a separate manner:

- Database distribution

According to Table 2, the overwhelming majority of journals of the analyzed articles are indexed in Scopus, Web of Science, ABS, and ABDC databases. More plainly, 17 journals out of 22 are indexed in the four aforementioned well-reputed databases. This implying, that 72.2% of the reviewed articles covered by the study sample were published in high-quality academic journals. Moreover, 4 journals out of 22 are indexed solely in Scopus and Web of Science.

Table 2. Database distribution

	Scopus	Web of Science	ABS	ABDC	ESG organizations' websites/ research organizations
Freq	21	21	17	17	1
Percentage	95.4%	95.4%	72.2%	72.2%	4.5%

- Year of publication distribution

Table 3 presents a summary of the year of publication, As shown from the table, the general trend of publishing articles in the year of 2022 was greater than 2021, and 2020, respectively. The findings of the study sample support the argument that accounting for climate change have witnessed a reasonable increased awareness from the researchers worldwide. More minutely, while 2 (7.4%) articles of the study sample were published 2020, 16 (59.3%) articles were published in 2022.

- Journal distribution

In terms of the journal distribution, Table 4 reports that 3 papers were published in the Business Strategy and the Environment, 2 research papers were published in Sustainability, and 2 articles were published in both Journal of Cleaner Production and Carbon Management. In this vein, we can argue that the underlying logic stands behind these findings is that journals interested in more than one research area or category have the considerable load of publications, particularly, journals that cover accounting, business, management, and environmental science areas simultaneously.

Table 3. Year of publication

Year	Freq	%
2020	2	7.4
2021	9	33.3
2022	16	59.3
Total	27	100

Table 4. Journal distribution

Journal name	Freq	Journal name	Freq
Sustainability	2	Meditari accountancy research	1
Journal of corporate accounting & Finance	1	International review of economics & Finance	1
Accounting, auditing & Accountability journal	1	Carbon management	2
Business strategy and the environment	3	European business organization law review	1
Sustainable development	1	Corporate governance: an international review	1
Tourism management	1	Journal of cleaner production	2
European management review	1	Accounting & Finance	1
British journal of management	1	Strategic management journal	1
Accounting in Europe	1	Corporate governance: the international journal of business in society	1
Society and business review	1	Swiss finance institute	1
Accounting research journal	1	Review of accounting studies	1

– Publisher distribution

The distribution based on publisher shows that which publisher have most articles covered by the study sample. As presented in Table 5, the most analyzed papers were published in journals working under the umbrella of “Wiley”, followed by Emerald, Elsevier, Taylor & Francis, MDPI, Springer, and Swiss Finance Institute, respectively. Notably, approximately 37% of the reviewed articles were published in Wiley journals. However, these statistics are not a benchmark to evaluate the different publishers regard-

ing the climate change related disclosures. The plausible logic behind that is that the study analysis based solely on a random sample.

Table 5. Publisher distribution

Publisher	Freq	%
MDBI	2	7.4
Wiley	10	37.1
Emerald	5	18.5
Elsevier	4	14.8
Taylor & Francis	3	11.1
Springer	2	7.4
Swiss Finance Institute	1	3.7
Total	27	100

– Keywords distribution

As shown in Table 6, the total authors' keywords related to climate change disclosure was 27 keywords. More plainly, the most widely keyword was climate change, this keyword was used by 11 of the reviewed articles. Denoting that, on average, approximately forty-one hundredths 40.7% of the analyzed papers have the climate change in the keywords list. The second most widely keyword in the reviewed articles was carbon reporting/disclosure 33.3%, followed by greenhouse gas disclosure 18.5%, corporate climate change disclosure 14.8%, greenhouse gas emissions 14.8%. These content analysis findings attributed to the logic that the climate change is the primary umbrella of a stream of different keywords.

Table 6. Keywords

Keywords	Freq	%	Keywords	Freq	%	Keywords	Freq	%
Climate change	11	40.7	Carbon Disclosure regulation	1	3.7	Dependencies reporting	1	3.7
Corporate climate change disclosure	4	14.8	Carbon reporting/disclosure	9	33.3	Climate-related opportunities	1	3.7
Sustainability accounting	3	11.1	Greenhouse gas disclosure	5	18.5	Climate risk disclosure	5	18.5

(continued)

Table 6. (continued)

Keywords	Freq	%	Keywords	Freq	%	Keywords	Freq	%
Sustainable development	2	7.4	Greenhouse gas emissions	4	14.8	Climate-change financial disclosure	1	3.7
Sustainability reporting and disclosure	3	11.1	CO ₂ emissions/disclosures	3	11.1	CSR	2	7.4
Sustainability accountability	1	3.7	Carbon disclosure project	3	11.1	TCFD	2	7.4
Environmental disclosure	2	7.4	Carbon transparency	1	3.7	TCFD recommendations	1	3.7
SDGs	2	7.4	Non-financial disclosure	3	11.1	Greenwashing	1	3.7

– Research methods distribution

In terms of research methods disclination, Table 7 displays an overview of several of the research methods and approaches. Unsurprisingly, empirical methods were the most widely adopted methods by prior researchers in the reviewed articles. More specifically, 74.1% of the analyzed papers used empirical techniques and methods, including, but are not limited to, ordinary least squares (OLS), two-steps system GMM, two-stage least squares (2SLS), and three-stage least squares (3SLS). Furthermore, literature review studies accounted for 22.2% of the study sample, while the remaining 3.7% of the analyzed articles was case study.

Table 7. Research Methods

Adopted method	Freq	%
Case/Field study	1	3.7
Interviews	-	-
Survey/questionnaire	-	-
Content analysis/Empirical	20	74.1
Literature review/Theoretical	6	22.2
Total	27	100

– Authors affiliation distribution

Table 8 provides a detailed view of the authors' affiliation distribution, As shown from the table, the overwhelming majority of reviewed papers were written by academicians and scholars. More specifically, the table shows that 96.3% of the analyzed papers

were academic papers. This result was not surprising, since the academicians are more interested in writing research than their practitioners' counterparts. The entrenched logic behind this finding is to achieve the promotion requirements.

Table 8. Authors affiliation

	Freq	%
Academic	26	96.3
Practitioners		
ESG organizations' reports/research organizations	1	3.7
Total	27	100

– Categories of journal distribution

In relation to the main categories of journals, we can articulate that all journals are marked and classified in one or several subject fields. Accordingly, this subsection provides a clear spectacle of the most widely categories of climate change disclosures. Considering the aforementioned, Table 9 provides a summary of the main areas that the journals of the reviewed articles are classified and indexed in. More distinctly, Table 9 shows that the most widely category of climate change related disclosures were accounting and management nearly 77.7% of journals under investigation, followed by business, environmental science, economics, sustainability, respectively.

– Subject area/categories of journals

Table 9. Main categories of climate change disclosure

Rank	Category	Freq	%	Rank	Category	Freq	%
1	Management	21	77.7	5	Finance	8	29.6
1	Accounting	21	77.7	6	Sustainability	5	22.2
2	Business	20	74.1	7	Planning and development	6	18.5
3	Environmental science	10	37	7	Engineering	5	18.5
4	Economic	9	33.3	8	Policy and Law	4	14.8

– Future directions distribution

We can argue that identifying the future directions and gaps in the current literature help in enriching the knowledge and contributes theoretically and practically to the

corporate climate change related issues. In this vein, Table 10 presents a summary of future avenues and research trends which were manually identified by reviewing articles included in the study sample. More clearly, the results show that the more recent literature of the climate change related disclosures denote that the climate change risk, disclosure of climate change information, determinants of carbon disclosure practice, climate change mitigation are fertile ground for future research and merits more attention and recognition by the researchers.

Table 10. Future research proposals of reviewed studies

Future directions	Freq	Future directions	Freq
Climate change mitigation	2	Corporate governance committees and climate change disclosure	1
Climate change risk assessments	2	Professional shareholders and climate change disclosure	1
Climate risk disclosure	4	Professional shareholders and greenhouse gas emissions	1
Quality of TCFD reporting	1	Disclosure of greenhouse gas emissions	1
Corporate climate change disclosure	4	Indirect nexus between greenhouse gas disclosure and cost of equity capital	1
Determinants of disclosure of climate-related information	2	Cultural dimension and greenhouse gas reporting	1
Determinants of carbon disclosure practice	3	Indirect nexus between board diversity and carbon disclosure	1
Quality of carbon disclosure	2	Managerial ability and climate change disclosure	1
Indirect nexus between climate change-related disclosure and firm performance	1	Corporate greenwashing and voluntary environmental disclosures	1
Top executives' attributes and voluntary climate change disclosure	1	Carbon disclosure and IFRS	1

6 Conclusion and Future Research Directions

In the contemporary business context, there is a global increasing importance of the climate change information disclosure. In this light, this review study intends to analyzes the prior research to extract fruitful insights for future studies. More specifically, this review article inclines to explore the emerging trends of climate change related disclosure in light of the recent initiatives of IFRS Foundation. In this context, this study contributes to the current knowledge of climate change disclosure by providing broad evidence about the most widely and recent topics that recently addressed by accounting scholars. To

accomplish the aforesaid points, a content analysis technique was used by the author to minutely epitomize the prior perspectives and trends in climate change disclosure literature.

Based on the study analysis, it's clear that the following avenues reflects contemporary research concepts nowadays; climate change risk disclosure, climate change risk assessments determinants of carbon and greenhouse gas disclosures, the nexus between corporate governance dimensions and climate change related disclosures. Accordingly, this study encourages the researchers to empirically investigate the influence of board diversity, ownership structure, audit committee, green innovation, biodiversity, cost of capital on climate change related disclosures. Drawing on the aforesaid, this review study also encourages the researchers for considering the moderating and mediating effects since the overwhelming majority of current literature was restricted to investigate the direct nexus.

Although this review article intends to provide a multifaceted view of the accounting for climate change, we acknowledge that this study has a few limitations and the results should be interpreted cautiously. *First*, our sample was restricted solely to prior academic articles available in the leading databases, namely, Scopus, Web of Science, ABS, and ABDC. *Second*, the publication timespan was bounded to the period of time 2020–2022.

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Appendix

Table 11. List of reviewed articles

Authors	Year of publication	Article title
Gulluscio et al.	2020	Climate Change Accounting and Reporting: A Systematic Literature Review
Guo et al.	2022	Theories applicable to corporate climate change disclosure
O'Dwyer, & Unerman	2020	Shifting the focus of sustainability accounting from impacts to risks and dependencies: Researching the transformative potential of TCFD reporting
Demaria, & Rigot	2021	Corporate environmental reporting: Are French firms compliant with the Task Force on Climate Financial Disclosures' recommendations?

(continued)

Table 11. (continued)

Authors	Year of publication	Article title
de Grosbois & Fennell	2022	Determinants of climate change disclosure practices of global hotel companies: Application of institutional and stakeholder theories
Shui et al.	2022	Climate change disclosure and the promise of response-ability and transparency: A synthesizing framework and future research agenda
Panfilo & Krasodomska	2022	Climate Change Risk Disclosure in Europe: The Role of Cultural-Cognitive, Regulatory, and Normative Factors
Maji, & Kalita	2022	Climate change financial disclosure and firm performance: empirical evidence from Indian energy sector based on TCFD recommendations
Lin & Wu	2022	Climate risk disclosure and stock price crash risk: The case of China
Khalid et al.	2022	Carbon disclosure project: Chinese chief executive officer background and corporate voluntary climate change reporting
Attenborough	2022	Corporate Disclosures on Climate Change: An Empirical Analysis of FTSE All-Share British Fossil Fuel Producers
Daradkeh et al.	2022	Does managerial ability matter for corporate climate change disclosures?
Mateo-Márquez et al.	2022	An international empirical study of greenwashing and voluntary carbon disclosure
Borghesi	2021	Carbon disclosure: A systematic literature review
Flammer et al.	2021	Shareholder activism and firms' voluntary disclosure of climate change risks
Cosma et al.	2022	Sustainable governance and climate-change disclosure in European banking: the role of the corporate social responsibility committee
Ilhan et al.	2021	Climate risk disclosure and institutional investors
Downar et al.	2021	The impact of carbon disclosure mandates on emissions and financial operating performance

(continued)

Table 11. (continued)

Authors	Year of publication	Article title
Gerged et al.	2021	Mandatory disclosure, greenhouse gas emissions and the cost of equity capital: UK evidence of a U-shaped relationship
Chen et al.	2021	Voluntary disclosure of greenhouse gas emissions by cities under carbon disclosure project: A sustainable development approach
Benlemlih et al.	2022	Institutional Ownership and Greenhouse Gas Emissions: A Comparative Study of the UK and the USA
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Islamic Private Equity: A Hybrid Equity-Debt Structure as an Alternative Investment Structure

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Abstract. This paper (“Paper”) aims to assess and evaluate the prevailing issue faced by the Islamic Private Equity (“IPE”) market in its market growth and find a certain alternative Shariah structuring solution to address such impediments. Historically, the IPE industry is often faced with “opportunity access” limitations particularly in the selection of underlying assets which comply with the de facto Shariah equity-based contract requirements as adopted such as financial screening ratios, cash management policies and hedging techniques among others. As a result, IPE industry continues to remain in its conundrum which inevitably affects its traction and performance. This Paper shall establish the fact that it more of a structuring issue rather than a Shariah guideline issue which can actually be resolved using alternative structuring solutions. Therefore, an alternative Shariah structure will be proposed to move forward without implicating the adherence to the respective Shariah guidelines as applicable.

Keywords: Islamic Private Equity · Islamic finance · Shariah investment guidelines

1 Introduction

Islamic Private Equity (“IPE”) is an important component within the overall Islamic financial market. It plays a major role within the overall economy and accelerates the growth of small medium enterprises (“SMEs”) through financing, sharing of experience, skills and professional network (Chatti and Yousfi 2010). Despite comprising a smaller portion of the total *Shariah* compliant banking and financial assets worldwide, IPE, remains an integral contributor within the USD 2.875 billion total asset size of Islamic fund component which accounts to around 5% of the total Islamic finance assets as per the 2019 statistics (Refinitiv 2020). *Shariah* compliant investors such; Islamic banks (whether via full-fledged or Islamic Window operations), Islamic pension funds, Islamic fund managers, family offices and *Shariah* compliant individual investors would still require suitable alternative avenues to invest their funds, spread the risks and eventually meet their desired target of returns and to answer to their relevant stakeholders. Historically, statistic of returns generated from the IPE segment has always been lower compared to the returns of their conventional private equity counterparts (Hayat and Kraeussl 2011; Nainggolan, How, and Verhoeven 2013). Upon scrutiny, it is found that

the main issue faced by the relevant Islamic fund managers is the limited options available as most of the assets do not meet the relevant *Shariah* screening requirements imposed upon them to equally participate in quality investment opportunities and assets worldwide. Such *Shariah* screening filtering process would typically result in the reduction of the investable universe and consequently, less favourable risk-return trade-offs (Renneboog, Ter Horst, and Zhang 2008).

This limited option issue is even faced in *Shariah* compliant friendly jurisdictions such as South East Asia and Middle East region what more in other western jurisdictions such as in Europe and North American where Islamic private equity market can almost be viewed as non-existent or negligible. This causes the biggest disadvantage to the IPE market as these western jurisdictions often offer better quality and performing assets especially within a more established and matured regulatory and governance framework. In light of the above, this Paper aims to analyse and examine the root cause and prevailing issues faced by the IPE industry in facing the abovementioned issues which is seen to persist till date. At the end, this Paper aims to devise a solution that may finally address such impediments and serve as a much needed breakthrough in order for IPE and the conventional private equity market to be competing at a level playing field, similar to what is already enjoyed by the banking and capital market industry.

This Paper aims to achieve the following objectives:

1. To assess/evaluate the on-going restrictions faced by IPE investors when utilizing the available pure Islamic equity investment structures against the fund manager and underlying companies' investment requirements.
2. To assess/evaluate the need for an alternative investment structure which may solve the issues faced from such restrictions but at the same time maintain the sanctity of the *Shariah* standards applied.
3. To devise and establish the need for such alternative investment framework structuring solution as a way to move forward for the IPE industry (the "Industry"). A hybrid debt-equity structure comprising of Commodity *Murabahah*, *Wa'ad* and Commodity *Musawamah* structure shall be established as the ideal solution to address the prevailing issues faced via a pure Islamic equity investment structure in accessing the conventional markets while at the same time serve the same economic objective of the business strategy.

2 Literature Review

The overall Islamic finance industry nowadays is argued to rely extensively on Islamic banking products and services which are overwhelmingly dominated by debt-based modes of transactions (Anwer et al. 2019). Statistics have shown that *Shariah* contracts utilized in Islamic transactions are predominantly, *Murabahah* (more than 78% of total assets) and *Ijarah* (11%) while equity based contracts of *Musharakah* and *Mudharabah* merely constitutes around 6% of the market share (Hakeem 2019). This is opposed to the popular argument that the main substance of Islamic finance is supposed to be equity-based, by promoting wealth creation, risk sharing participation and social justice, amongst others as the ideal way to move forward (Smolo and Mirakhor 2010). IPE has

always been claimed to be the nearest to the above concept involving direct participation in the real economy and accordingly, the concept of profit-loss sharing is more realized in substance rather than form (Elsiefy 2014). *Mudharabah* (profit sharing) and *Musharakah* (partnerships) is often claimed to be the preferred Shariah structure which uphold the principles of equity-based investments in its true essence (Anwer et al. 2019).

The underlying basis behind the emergence of the IPE market is due to the desperate need of funding by primarily small and medium entrepreneurs (SME) segment of the market which are unable, or rather unqualified to tap into the banking sector liquidity (Hakeem 2019). Amongst the reasons are because of; early idea generation stage, no or lack of assets and no track record. IPE seeks to address these gaps by providing the much-needed funding sources and support the growth of these SME which is hoped to eventually turn into larger and more stable corporations in the future, and accordingly, be eligible to the banking products and services. The typical investors who are willing to take these risks are institutional investors or high net worth individuals (HNWI) who do not pose strict risk framework constraints and more risk takers unlike the banking institutions which are more risk averse.

IPE economic objectives do not differ from conventional private equity, except is almost entirely the same. The main difference between the observance of a set of certain additional set of rules which is typically referred to as the *Shariah* guidelines which must strictly be adhered to by IPE. This *Shariah* guidelines among others dictates among others; certain prohibited sectors, *Shariah* investment contracts to be utilized, engagement with *Shariah* advisors for on-going monitoring, purification process and the requirement of *Shariah* audit exercises, amongst others. Further explanation on the main difference between IPE and conventional private equity under the *Shariah* guidelines are as follows:

1. Core business activity screening: IPE excludes investment into companies, which perform activities which are prohibited by *Shariah* for example; related to alcohol, pork, gambling, arms, tobacco, pornography and conventional financial services, amongst others.
2. Financial screening: IPE prohibits investment into companies which has the following financial ratio thresholds: a) total conventional debt over total assets exceeding 33%, total interest-bearing investments/securities over total asset exceeding 33% and total *Shariah* non-compliant income/tainted income (from sources as per the above mentioned *Shariah* non-compliant core business activities) over total revenue exceeding 5%.

All of these is to make sure that the IPE business conforms to the relevant *Shariah* principles i.e. investment within the boundaries of faith requirements.

The IPE industry (the “Industry”) is often faced with limitations when it comes to its investment requirements. Islamic investments differ from conventional investment whereby it includes additional guidelines to comply with for example the requirement for financial screening requirements on the underlying target assets, assessment on its cash management policies and hedging techniques among others. These *Shariah* requirements are applicable since IPE investors are naturally treated as a standard equity investor, hence all *Shariah* compliant investment requirements of an equity-based structure such as *Wakalah*, *Mudharabah* and *Musharakah* will be applicable accordingly. When such

equity-based structuring model is adopted, in most circumstances, it will result in the underlying target assets/companies (the “Company”) not being able to meet the relevant *Shariah* financial screening requirements as stated above as adopted and approved by the fund manager’s *Shariah* Supervisory Board (“SSB”). The rationale behind the imposition of these ratios is to discourage excessive use of leverage and interest-bearing income which is a *Shariah* non-compliant instrument (Derigs and Marzban 2008; El-Gamal 2006). Further to the above, more often than not, the Company will also not be able to comply with the other *Shariah* requirements such as on hedging techniques, cash management policies, short term investments, bridge financing, etc. which all have to be strictly on a *Shariah* compliant basis. For the fund managers, these requirements are too cumbersome especially in jurisdictions where the Islamic finance infrastructure and framework is very weak or almost non-existent. As a result, investment sourcing will be hampered, negotiations will fail, and IPE investors will remain stuck with its limited options in the limited jurisdictions which are only able to meet its requirements, albeit also with the narrow choice of selections. Therefore, despite the enormous potential, the IPE Industry is seen to be stuck in this “lack of viable investment opportunities” conundrum.

One needs to understand that in order for a business to run and thrive, it has to be compatible within the boundaries of the applicable laws and regulatory framework of that particular country (Ahmad and Hassan 2009). This would therefore appear as the main issue faced when the IPE market wishes to explore and have access to investment opportunities in non-Muslim majority countries particularly within the Western world. In this regard, it must be noted that despite being different in terms of the structure and underlying contracts, Islamic financial activities, e.g. Islamic banking, still submits and is subject to the same single banking regulatory framework in that particular country. The common regulatory framework seeks to regulate and protect the bank’s account holders, shareholders, other stakeholders and community at large in ensuring overall efficient banking system and averting systematic lending risks. Islamic Banks and Islamic Financial Service Providers, while having the need to ensure that their activities comply with the relevant *Shariah* requirements, bear a greater responsibility to ensure that their activities are financially sound and that promotes economic and political stability within the country of operation (Wilson 2003). For example, Islamic banking activities in Australia would still need to be interpreted and submit to the regulations of the Australian Prudential Regulation Authority (APRA) and the Financial Conduct Authority (FCA) in the United Kingdom.

When a regulator in a certain non-Muslim majority country is not familiar with the Islamic finance framework, therefore licenses for such Islamic financial activity is not given, or if granted, comes with various restrictions. Consequently, the overall Islamic financial industry is seen to be very small in size and effectively, making it uncommercially viable for players to subscribe to such products to satisfy the relevant certain *Shariah* compliance requirements. The same would be seen in the IPE market where for example, if SME wishes to penetrate into the IPE investor market, its financial activities need to fulfil the *Shariah* compliant financial screening requirement including the conventional debt threshold which should be less than 33%. One should remember that the private equity market is often highly leveraged as it typically consists of SMEs

which include start-up companies which are very capital light. These SMEs may indeed, if given a choice, wish to raise debt in a *Shariah* compliant format, however, the main issue that arises is then whether such *Shariah* compliant facilities even exist or available in the jurisdiction that they operate. When the answer is the negative, they therefore have no other choice but to resort to conventional banking facilities and thus, making them automatically ineligible to access the IPE investor market. This has in fact, been cited as the main issues by Islamic investment analysts as the reason why they are unable to tap into the private equity market outside of Muslim majority countries where the private equity market is much bigger, more established and matured, hence offering a variety of quality private equity asset selection options compared to the limited options that they face for example in Malaysia and Middle East only.

By proper understanding of the above impediment, one should be able to easily realize that such an issue faced is more of a structuring issue rather than a *Shariah* issue which can actually be resolved using alternative structuring techniques. A complete understanding of the various other *Shariah* contracts available and the applicable rules will allow a person to apply innovation in the transaction structuring process and find a reasonable way out. Accordingly, a combination of a debt structure embedded in the overall economic nature of such intended equity investment purpose may serve as an alternative-innovative solution whereby such debt structure may ease the underlying *Shariah* restrictions of a pure equity investment structure requirements. This “hybrid debt-equity structure” may therefore offer a new horizon to IPE investors to move forward and grow the industry bigger by giving it access to markets in which it would have otherwise been almost entirely precluded.

3 Research Methodology

This Paper employed a qualitative research methodology which emphasized on readings and assess/evaluate on various reading materials such as journals, research papers, articles and books with the aim to assess perceptions and understandings. Specific information was gathered from data centres and libraries and a thorough analysis were made therein. This qualitative method and paradigm is an approach which depends on investigative people’s words and actions in narrative or descriptive ways (Maykut and Morehouse 1994). Overall, textual analysis method was applied where data are looked at from the angles of texts, passages, expressions and detailed wordings (Bryman 2004). This was to achieve an authentic understanding which Gubrium and Holstein (1997) referred as one that reflects fairly the various perspectives of participants in that setting.

Besides reading and analysis of the above sources, references and analysis will also be made to the relevant *Shariah* standards and resolutions of *Shariah* scholars in Islamic finance and authoritative *Shariah* bodies which forms the third source of Islamic sources i.e. *Ijtihad* (reasoning efforts) and *Ijma’* (consensus). The current state of the Islamic finance industry is already richly flourished with various *Shariah* standards, guidelines and *fataawa* (*Shariah* pronouncements) by eminent authorities. Reference is made to the religious authoritative bodies/organization dealing with the Islamic finance industry worldwide e.g.; the Islamic Fiqh Academy, Accounting and Auditing for Islamic Financial Institutions (AAOIFI) and then to the nationwide regulating bodies e.g.; the *Shariah*

Advisory Council of each country and finally the regulating bodies on institutional basis i.e. the *Shariah* Supervisory Board of respective financial institutions. This is because in extracting the core principle and understanding the underlying foundation of the issue from the grassroots, main reference will be made to the ontological and epistemological source of Islam itself which includes the *Ijma'* (Dusuki 2012). Comparative studies on different views from these focus groups will be conducted as Khan and Mander-son (1992) described this qualitative process as a way of understanding issues from the group's participants' perspective.

4 Recommendation and Result

After understanding the prevailing issues faced by the IPE market, it can be verified that the issues of lack of available IPE assets is rather due to *Shariah* structuring issues which enables the participation of Islamic investors rather than the availability of the assets themselves. This can be addressed using suitable *Shariah* compliant techniques within the parameters of the *Shariah* compliance framework and blessed by the relevant *Shariah* scholars.

The proposed solution involves utilizing *Murabahah* structure in the beginning. In a *Murabahah* debt investment structure, the financier (i.e. investor) need not comply with the *Shariah* financial screening requirement. According to almost all *Shariah* standards as applicable, a *Murabahah* financier need only ensure that the financed party (customer) utilizes such financing facility for *Shariah* compliant purposes. Therefore, this can be ascertained by applying the *Shariah* core business activity screening as stated above. There is no further requirement to ensure that the financed party fulfils the *Shariah* financial screening requirement as the intention is not to invest into the company but only to act as a creditor. The same can be seen in all Islamic banking cash financing facilities offered by Islamic banks or Islamic window operations to their customers whereby the assessment made by the banks are only in relation to the core business activity of the customer to ensure that they are not repugnant to *Shariah* hence implicating the bank from a reputational risk perspective. Continuous utilization for *Shariah* compliant purposes is also made as an undertaking requirement by the customer to the bank as per the provision of the legal agreement and any breach would result in a ground for termination of the facility.

If one were to apply the same requirement from in the IPE market, many of the assets would certainly meet the requirement as many companies for example in North America or Europe do conduct their business activities within the Environmental, Social and Governance (ESG) or ethical business space which significantly overlaps with the *Shariah* compliance activity requirements. This would therefore give a good start for IPE players to be afforded with a wide variety of quality asset options in these markets and therefore develop their portfolio-base. Of course, the above is not the only the filtering requirement as IPE would still need to impose other *Shariah* investment requirements such as continuous oversight of the activities, an annual *Shariah* audit exercise, endorsement process by a *Shariah* Supervisory Board etc. but these are rather achievable by the companies to comply with, rather than the stricter pre-*Shariah* financial screening requirement itself. In the meantime, while it must be also realized that the economic objectives which is

desired to be achieved here is an “equity” type of return rather than a fixed debt type of return, such realization of actual profit based on “actual performance” of the underlying asset can be achieved by way of the subsequent commodity *Musawamah* to be entered between the company and the IPE investor vehicle which allows for the nett commercial effect to be transferred between the parties. The obligation to enter into this subsequent commodity *Musawamah* is secured by way of a unilateral *Wa’ad* (undertaking) given by each party in favour of each other upfront during the *Murabahah* transaction stage.

Accordingly, the detailed proposed Structure is illustrated and explained as follows (Fig. 1):

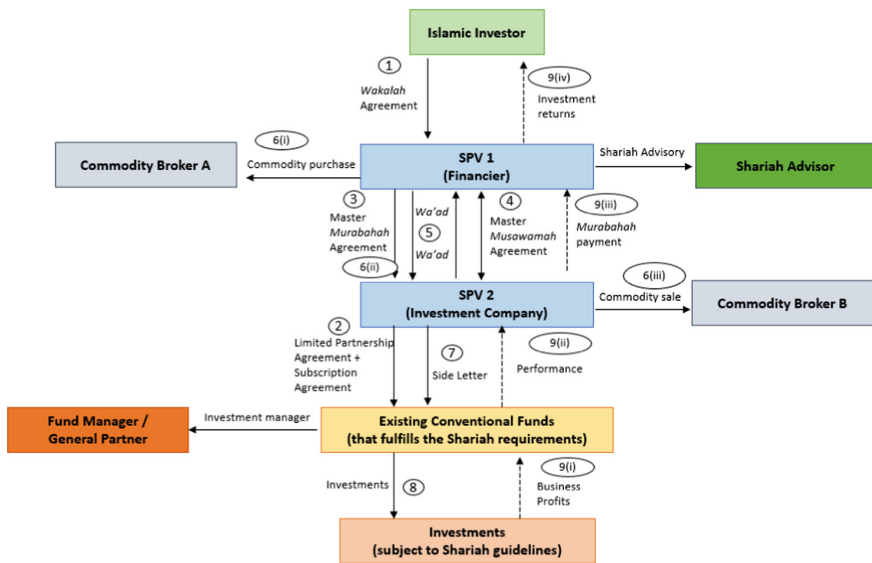


Fig. 1. The hybrid debt-equity Structure

The summary of the investment Structure (“IPE Funding Arrangement”) is as follows:

1. Islamic investor (the “Investor”) will enter into an agency agreement and the relevant agency request and acceptance (“*Wakalah* Agreement”) with the SPV Financier and will commit to fund its capital commitment (“Capital Commitment”) indirectly to the fund (the “Fund”), as and when called pursuant to the Fund’s Limited Partnership Agreement (“Partnership Agreement”). Based on the *Wakalah* Agreement, the Financier will conduct and enter into the IPE Funding Arrangement as agent for the Investor with the investment company (the “Investment Company”).
2. The Investment Company will enter into the Limited Partnership Agreement, Subscription Agreement and the relevant conventional investment documentation to become a Limited Partner in the Fund with a Capital Commitment equal to the Investor’s indirect capital commitment to the Fund.

3. The Investment Company and the Financier (as the Investor's agent) will enter into a Master *Murabahah* Agreement, pursuant to which the Financier will commit to concurrently fund the Investment Company at the times the Fund calls capital from the undrawn Capital Commitments of its limited partners ("Limited Partners"). The Financier, as Investor's agent, shall fund to the Investment Company an aggregate amount equal to its capital commitment to the Fund as per the pre-agreed *Murabahah* arrangement, and enables the Investment Company to drawdown on the Master *Murabahah* Agreement, on an as-needed-basis, in order to fund its Capital Commitment to the Fund as and when required pursuant to the terms of the Fund's Partnership Agreement.
4. The Financier, as Investor's agent and the Investment Company, will also enter into a Master *Musawamah* Agreement. The *Musawamah* transactions will be entered into to either 1) capture any additional returns (upside) as realized by the Fund over and above the Capital Commitment of the Investor and as per the *Murabahah* transaction(s) or 2) to capture any loss (downside) attributable to the Capital Commitment of the Investment Company as per the *Murabahah* transaction(s), and subsequently the indirect investment by the Financier (on behalf of the Investor) in the Fund.
5. The obligation to enter into the Master *Musawamah* Agreement is secured by way of a *Wa'ad* given by each, the Financier and the Investment company in favour of each other. Each *Wa'ad* will be a unilateral undertaking and mutually exclusive.
6. *Murabahah* Transaction Mechanics:
 - i. The Investment Company will request the Financier to purchase, as principal, a quantity of commodities from commodity broker seller on immediate payment terms for a price equal to that portion of the Capital Commitment being drawn down by the Investment Company from the Financier ("Cost Price"), which will coincide with each capital call made by the Fund.
 - ii. Pursuant to the request, the Financier will purchase the commodities and immediately thereafter, offer to sell the same commodities to the Investment Company. The Investment Company will accept the purchase of such commodities for a price (the "Deferred Purchase Price") which consists of the Cost Price and a pre-agreed profit element (the "Profit"). The Deferred Purchase Price will be due and payable on the "Deferred Payment Date" set out in the documents.
 - iii. Once a *Murabahah* transaction has been concluded, the Investment Company will on-sell the commodities it now owns to commodity broker buyer and deposit the proceeds of such sale to the designated account of the Investment Company. The proceeds of such sale will be an amount equal to the Cost Price. The Investment Company will then utilise these funds to satisfy the applicable capital call to the Fund with respect to its Capital Commitment thereto.
7. Pursuant to the above, the investments made by the Investor is based on a debt instrument rather than an equity instrument. As such, a side letter will be entered into between the general partner ("General Partner") of the Fund, the Investment Company and Investor (the "Side Letter"), which will outline that whilst for the purpose of *Shariah* the Investor's indirect Capital Commitment to the Fund is a debt instrument, for all other intents and purposes, the Investor's indirect Capital

Commitment to the Fund made through the Investment Company will be treated as, and will have all the rights and obligations of, a Limited Partner in the Fund.

8. The Fund shall have a legal obligation to ensure that the investment made by the Fund utilizing the Capital Commitment of the Investment Company, which is indirectly attributable to the Investor to comply with the relevant requirements as provided under the *Shariah* guidelines (“*Shariah* Guidelines”) described in the Side Letter. The compliance to such requirement shall be continuously monitored by the Fund’s appointed *Shariah* Advisor. If determined to be necessary by the *Shariah* Advisor, the General Partner will consult with the Investment Company and use reasonable efforts to excuse the Investment Company from participating in the investment of the Fund that operates in *Shariah* non-compliant core business activities/industries pursuant to the requirements as applicable in the *Shariah* Guidelines.
9. Upon receipt of the actual returns from the Investments, the following pay offs will happen:
 - i. Fund will receive income from investments;
 - ii. Fund will make periodical dividend payment to the Investment Company as a Limited Partner (equity shareholder) based on the investment performance;
 - iii. Investment Company will thereafter use the dividend proceeds to pay its Murabaha deferred payment obligation to the Financier; and
 - iv. Financier will pay to the Islamic Investor the *Wakalah* investment returns.

The abovementioned proposed alternative structuring solution utilizing the IPE funding arrangement would therefore serve as solution to the IPE market in solving the *Shariah* equity investment guidelines and restrictions as faced. It gives a much breathing space to the IPE market players to open their arms wider, competing with the conventional private equity market and serve the objectives of Islamic economy which should be based on equity and risk participation as mentioned earlier on.

Besides the above, it would be much useful if this alternative structure would be adopted as a standardized structure for the Islamic Private Equity market moving forward ensuring consistency in terms of structure and documentation used by the fund managers. This will also enable familiarity and consequently, facilitate a more speedy decision making process by end investors. Product documentation standardization is no longer something new and in fact, has worked very well within the overall Islamic finance industry as we have seen various Islamic hedging products being standardized under the Master Tahawwut Agreement as developed by the International Swaps and Derivatives Association (ISDA)-International Islamic Financial Market (IIFM) collaboration and become the first choice of market players.

5 Conclusion

The Paper has presented and discussed the prevailing issues faced by the Islamic Private Equity industry. It started by explaining the issues and challenges faced by existing IPE players in sourcing quality underlying assets for the purpose of its investment due to the relevant restrictions faced by adopting the pure Islamic equity investment structures. As

a result, IPE investment returns have historically been underachieving compared to its conventional counterparty and data has also affirmed that market segments that exclude *Shariah* screening requirements would generate superior risk-adjusted returns (Hong and Kacperczyk 2009). From the analysis, it is discovered that such restriction faced by IPE players are mainly due to the structuring issues rather than *Shariah* issues which remains a misconception that needs to be clarified. As such, an alternative *Shariah* structuring solution which is built on a hybrid debt-equity structure model adopting the *Shariah* contract of Commodity *Murabahah*, *Wa'ad* and Commodity *Musawamah* is seen as the best alternative for such purpose whereby the *Shariah* financial screening requirements would not apply for such private equity investment purposes and only adopt the *Shariah* requirements applicable to such contracts. At the same time, the returns to be generated from such debt *Shariah* structures may be benchmarked against the performance of the desired underlying assets, hence in the end, achieving the same commercial results of an equity investment. As a result, this structure will be able to positively address the prevailing issues while at the same time maintaining and respecting the *Shariah* rules and principles as applicable.

It must be noted however that this alternative structure is only intended to be used for so long as the Islamic finance infrastructure is still weak in matured private equity markets and where Islamic financing solutions are not available or commercially viable. In the event that the market has developed, which will definitely take time as it involves various macro considerations, the full Islamic equity structure should be resorted which remains the true essence of Islamic equity investments. Until then, the application of this proposed IPE Funding Arrangement structure should be seen as a breakthrough to the on-going issues faced by the IPE players which would have otherwise hampered the progress of the Industry and eventually not attracting sufficient interest from the Muslim community itself, what more to the much larger non-Muslim community which should also be the aim in the propagation of the Islamic principles. Future additional researches on this Islamic private equity subject matter which is often marginalized in terms of importance within the overall Islamic finance industry, should also be afforded extra attention. Academic centres should cultivate increasing interest from students to explore the Islamic private equity market other than the more popular banking and capital market segments. Perhaps then, more alternative options may be designed backed by concrete *Shariah* basis and legal certainty. If the Islamic market has seen tremendous growth in the banking and capital market space even to the extent of its significant penetration to the non-Muslim market due to its various innovation, this therefore should be the similar case for the Islamic Private equity market and starting this mission by finding a solution to the prevailing issues faced is the key in achieving this ultimate objective.



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The Role of Corporate Governance in Managing Risks: An Applied Case on Companies Listed on the Palestine Stock Exchange

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Abstract. This study aims to examine the role of corporate governance (characteristics of board management) and its role in dealing with systematic and unsystematic risks. This study includes 44 companies listed in the Palestinian stock market distributed in 5 sectors. The panel research method was used for data collection and analysis. Results show that there is a significant role of corporate governance (characteristics of board management) in dealing with systematic and unsystematic risks in companies listed in the Palestine stock market.

Keywords: Corporate governance · Risk · Systematic risk · Unsystematic risk · Characteristics board

1 Introduction

Following corporate scandals like Enron, corporate governance has gained international attention. Its importance has further grown in the wake of the 2007–2008 global financial crisis. Corporate governance is considered a comprehensive strategy to effectively manage business affairs and safeguard and advance the interests of shareholders while also taking into account those of other stakeholders (Tarraf and Majeske 2013; Quang Trinh 2022). Corporate governance suffers when the risk is not adequately managed (OECD 2009). As a result, financial firms suffer enormous losses, like those that worsened the global financial crisis (Bebchuk et al. 2009). The likelihood of financial crises tends to decline with improved corporate governance (Claessens and Yurtoglu 2013).

Risk management behaviour that affects a company's success is influenced by the agency conflict between shareholders and managers (Jenson and Meckling 1976). Numerous research has looked at the connection between corporate governance and business performance to comprehend this conflict and the ensuing firm performance, but the findings have remained contradictory. However, little research has been done to examine the empirical connection between risk management and corporate governance. Since there is little literature on both corporate governance and risk management, one can wonder if risk management belongs in the category of corporate governance (Gericke 2018). The board of directors of a firm is ultimately in charge of risk management (McNulty et al. 2012; Aslam et al. 2021). Risk management is a mediating variable to

determine if risk significantly influences the relationship between corporate governance and a firm's financial success.

Most studies on corporate governance only took into account commercial banks, but this leaves out significant players in the financial sector and does not give a complete picture of corporate governance and risk management. The lines separating different financial institutions have blurred. As a result of developments in the financial market. Additionally, the majority of the risks that financial institutions (commercial banks, investment banks, and insurance businesses) confront are similar. Therefore, this study aims to investigate the impact of corporate governance on managing risks in the companies listed on the Palestine stock exchange. These companies include the Banking and financial market, services sector, industrial sector, Insurance Department and investment sector.

The structure of this study contains the First literature review about the characteristics of the board, second the methodology and the hypotheses of the study, third the statistical analysis and finally the results and conclusion.

2 Literature Review

Corporate Governance includes the rules and regulations required to operate the business in the interests of the shareholders. Additionally, it identifies the rights of directors and managers and clarifies the steps owners take to influence the choices of the company. Khan et al. (2018) indicated that the major role is played by corporate governance, a growing field, in the overall operation of a firm. An association between shareholders and senior management is a straightforward way to describe it and leads to success in organisations (Mathew et al. 2018). Corporate governance is an organization that brings together all relevant parties, including management, the board of directors, shareholders, employees, consumers, and investors (Ltifi and Hichri 2021). By providing checks and balances between the administration and investors, effective Corporate governance helps to resolve agency issues. Companies with effective governance practices should experience fewer agency issues in the future (Nakpodia and Olan 2022).

Risk management (RM) is "a process of recognising, evaluating, and prioritising risks of various types." Once the risks are identified, the risk manager develops a plan to reduce or eliminate the impact of unfavourable events (Altaf et al. 2021). Because risk management is integrated into the credit administration division, banks do not have risk management units (Munawar et al. 2022). Risk management procedures and policies are crucial for the stability of a long-term investment environment. Investors and partitioners need to be aware of the potential risk that may affect their business, to avoid losing money or facing business failure (Polinkevych et al. 2021). The Risk management practices of companies and businesses depend on the management's strategies, so the investor's confidence is maintained in the accompanying corrective actions (Mathew et al. 2018).

Several factors positively or negatively impact managing and dealing with risks. These factors are classified into dependent and independent variables. Independent variables include board size, board independence, gender diversity, CEO turnover and audit committee independence (Nakpodia and Olan 2022; Maher and Aquanno 2022). Independent variables include capital risk, credit risk and liquidity risk.

The ideal board size is considered a function of the directors' and the firm's characteristics (Elbahar 2016). Firm risks and Board size has a good working relationship since they shared information with the board's associates. Allam and Ali Shah (2013) also confirmed that Board size and firm risk are strongly correlated to each other. Larger boards are associated with lower risk, while smaller boards are associated with higher risk. There is evidence from previous literature indicating that risks and board size have a bad and strong relationship (Khan and Ali 2018; Nakpodia and Olan 2022).

Numerous studies demonstrated that risk-taking and board independence are positively correlated (Koerniadi et al. 2014; Khan et al. 2019). Mathew et al. (2018) indicated that board independence is negatively associated with risks. In large companies, the lower capital risk is one of the major benefits that can be created in companies with a larger number of independent or external directors who are not part of the executive team (Khan and Ali 2018). Maher and Aquanno (2022) confirmed that there is a positive relationship between risk related to firms and board independence.

Gender diversity including females and males is related to firm risk. Khan and Ali (2018) stated that women are more willing to take risks compared to men in business at different levels of management. However, female employees are required to abide by the company's rules, which lowers the risk level for the company. Mathew et al. (2021) demonstrated that there is a positive relationship between the number of female employees on board and risk management. Gender diversity inboard also impacts corporate governance and is linked with lower risk levels (Green and Homroy 2018). Another variable that affects managing risks is related to audit committee independence. Several audit members indicated that they had increased their direct engagement with management, and they suggested altering the kind and degree of their inaccuracy to enhance the company's performance and deal with risks effectively (Khan and Ali 2018). In many situations, investors encourage bank management to finance high-risk projects based on the options theory. Because of the high amount of risk, this could lead to management taking the chance of making money from underperforming investment projects that don't yield the high returns that were anticipated (Kyere and Ausloos 2021). Through risk analysis and risk management errors, Audit Committee independence is anticipated to have an impact on management decisions (Maher and Aquanno 2022). The risk-taking of banks with high audit committee independence efficiency is anticipated to be correlated with bank performance in banks with poor audit committee independence efficiency. The final independent variable is CEO turnover, where CEO leaves or resigns from the firm and another person takes their place and duties (Saeed and Saeed 2018).

3 Research Hypotheses

Depending on the above arguments, the following hypotheses were formulated: The first main hypothesis: There is a negative and significant relationship between the characteristics of the board of directors and systemic risks in the Palestinian stock market.

H1: There is a negative and significant relationship between the number of boards (NB) and Systematic Risk in the Palestinian Stock Market (PEX).

H2: Independence Board (IB) and Systematic Risk in the (PEX) have a negative and significant relationship.

H3: There is a negative and significant relationship between several meetings (NOM) and Systematic Risk in the (PEX).

H4: There is a negative and significant relationship between Director's independence (DI) and Systematic Risk in the (PEX).

Second Main hypothesis: There is a negative and significant relationship between Board characteristics and unsystematic Risk in the (PEX).

H1: There is a negative and significant relationship between the (NOB) and Unsystematic Risk in the (PEX).

H2: Independence Board (IB) and Unsystematic Risk in the (PEX) have a negative and significant relationship.

H3: There is a negative and significant relationship between (NOM) and Unsystematic Risk in the (PEX).

H4: There is a negative and significant relationship between (DI) and Unsystematic Risk in the (PEX).

3.1 Data and Methodology

3.1.1 Data

This paper aims to test whether corporate governance mechanisms (CGM) (Board characteristics) affect the Risk management (RM) of Palestinian firms listed in (PEX). Relevant Data to Board characteristics were taken from the annual reports of firms listed on the (PEX), during 2016–2021. Every listed firm is bound to organize its financial statements by the company's laws in Palestine Territories. Relevant data from (PEX) were taken according to calculate Systematic and Unsystematic Risk the researchers collected data from (PEX) about monthly Closing prices. There are 48 companies listed in (PEX), we element 4 companies because data is incomplete, consisting of 264 observations for 44 firms over a period of six years. Firms included in the sample belong to five sectors such as industrial, investment, banks, services and insurance.

3.1.2 Variables

In this study, the research objectives and variables (dependent and independent) used in this study and their definitions were adopted from the literature. Notably, market-based risk measures such as systematic risk computed by (Beta), and non-systematic risk computed by (Std. Dev.) were used as dependent variables. The main independent variables (CGM) are board characteristics (NOB), (IB), (NOM), and (DI). Furthermore, we use two control variables, leverage (LEV) and firm SIZE are also included in the estimation model to control for company-specific characteristics that may affect systemic and unsystematic risk.

The definitions of these variables are listed in the methodology of Table 1. This examination is to consider the effect of the components of board characteristics on systemic and systemic risk: Board characteristic information was collected from annual reports of Palestinian organizations registered in PEX covering the period from 2016 to 2021, and researchers used the information board for a period of six years in an average

period as board characteristic information yields more enlightening information, greater uncertainty, less linear relationship between factors, more levels of opportunity and more productivity, board characteristic information is better prepared to identify and identify unperceived influences in an area pure transpiration or time-series information that is not falsified again (Jager 2008).

The free factors in this investigation are the distinctive tools of the board that were identified with the Palestinian organizations registered in the Palestine Exchange. They can be predicted with previous checks, and we use some factors as shown in Table 1. The table shows the factors used and their estimates. It also hints at the concentrations at which these estimates are used.

3.1.3 Limitation

The data was collected from annual reports concentrating on the Board characteristic of Systematic and Unsystematic Risk for 44 firms listed in PEX from 2016 to 2021.

4 Methodology

This analysis aims to investigate how Board distinctive elements affect Systematic and Unsystematic Risk. The analysts used board information for six years because it provides more illuminating information, greater inconstancy, less collinearity among the factors, more levels of opportunity, and higher productivity. Board characteristic information was gathered from the annual reports of the Palestinian organizations recorded in the PEX covering the period from 2016 to 2021. Additionally, board characteristic data is easier to recognize and measure. Unadulterated cross-area or unadulterated time-series data do not reveal impacts that cannot be felt (Jager 2008). The Board identifying elements associated with the Palestinian groups included in the PEX serve as the investigation's free variables. We use a few variables that are shown in Table 1 and are predictable based on past tests. The factors used and their estimates are listed in the table. Additionally, it makes references to the concentrations where these estimations are applied.

The variable adopted in this investigation is systemic and non-systemic risks. In general, systemic and non-systemic risks can be estimated by calculating them in the beta of systemic risk and the standard deviation of the firm. Since no direct quantitative measure of these traits can be traced, and various tests are followed by Kyere and Ausloos (2021), the supply is estimated as market risk as the sensitivity to change in a stock caused by a change in the market, and the unsystematic risk of deviation of values from its mean. We recommend that the risks be linked to the characteristics of the board of directors and practice how to reduce them to the lowest possible level. Since the risk is obtained from the nature of the market and the company that was calculated from the closing prices of companies listed on the Palestine Exchange, the risk is estimated in the market and for the stock by calculating it from the data collected every month and computed for each year. This is consistent (Abuamsha 2021). In light of this view, the higher the degree of the independence of the board, the lower the risks, both systemic and informal, and the results presented in it are assumed, accordingly, the higher the independence of the board, the lower the risks in the business sectors presented by the organization (Shumali and Abuamsha 2023).

Table 1. Variables

Dependent variable	Measuring method	reference
Systematic	$\beta_{A,M} = \frac{\text{Cov}(R_A, R_M)}{\sigma_M^2}$ Measurement by Beta = $\frac{\text{Cov}(R_A, R_M)}{\sigma_M^2}$ Pa,m: Covariance between stock returns and market portfolio returns σ_A : Standard Deviation on stocks σ_M : Standard Deviation on Portfolio	Kamal Abu Amsha, (2017)
Unsystematic	σ_A : Standard Deviation on stocks	Kamal Abu Amsha, (2017)
Independent variable		
Number of Board	The number of board members	Aslam, al. et. (2021) Altaf, al. et. (2021)
Independence Board	It is measured by the percentage of members who are outside the executive management	Khan, S al. et. (2019) Koerniadi, H., al. et. (2014)
number of meetings	The number of board meetings	Kyere, M. (2021) Shumali, & Abuamsha. (2023).
Director's independence	It is measured by giving a dummy variable with a value of (1) if the manager combines the positions of CEO and Chairman of the Board of Directors, and a value of (0) otherwise.	Abuamsha, M. K. (2021). Kyere, M. (2021) Shumali, & Abuamsha. (2023).
Control Variable		
Size	Calculating the natural logarithm of total assets	Shumali, & Abuamsha. (2023) Abuamsha, M. K. (2021).
Leverage	It is measured as total liabilities divided by total assets	Khan, S al. et. (2019)

4.1 Research Model

Literature Consistent (Kamal Abu Amsha (2017), Shumali and Abuamsha (2023), Abuamsha (2021)), we developed the following model to examine the effect of Board characteristics on Risk.

$$\begin{aligned} \text{Systematic Risk} &= \alpha + \beta_1 \text{NOB} + \beta_2 \text{IB} + \beta_3 \text{NOM} + \beta_4 \text{DI} + \beta_5 \text{LEV} + \beta_6 \text{SZ} + \varepsilon \\ \text{Unsystematic Risk} &= \alpha + \beta_1 \text{NOB} + \beta_2 \text{IB} + \beta_3 \text{NOM} + \beta_4 \text{DI} + \beta_5 \text{LEV} + \beta_6 \text{SZ} + \varepsilon \end{aligned}$$

The information obtained must be investigated and disclosed to be of value to the achievement of exploration objectives and to answer their inquiries. In the analysis, the researchers used charm measurements to depict key features and summarize a particular arrangement of information as follows. First, of all, researchers present mean, standard deviations, least value, largest value, skew, kurtosis and F-test, B-P LM test (X2), Hausman test (X2), Breusch-Pagan/Cook Weisberg test (X2), Wooldridge test,

For each model of the investigation. Second, the Pearson correlation matrix is used to check whether there is a linear multi-linear problem between the independent factors and the force measure and the address of the connection between the free and wing factors. Finally, due to the non-stationary framed information, generalized random regression was used to test the screening predictions.

5 Applying Study

The study used a random-effects panel data regression model to examine whether corporate governance mechanisms (CGMs) act as SV drivers are corporates listed in the Palestine Stock Exchange distributed over five sectors. The preference for using the random-effects model over the pooled ordinary least squares and the fixed-effects models researchers was a result of the F-test and B-P LM estimates for all panel data regression models. The study used a random-effects panel data regression model to examine whether CGMs act as SV drivers are corporates listed in the Palestine Stock Exchange distributed over five sectors. The preference for using the random-effects model over the pooled ordinary least squares and the fixed-effects models researchers was a result of the F-test and B-P LM estimates for all panel data regression models. The estimates of the Hausman specification test for all panel data regression models were not significant as shown in Table 2. The table also shows that the estimates of the BreuschPagan/Cook-Weisberg test for the panel data models were not significant, indicating that elastic covariance is not likely to be a problem in all models. For the Wooldridge test for models in Table 2, the values are large, which indicates that the models are affected by autocorrelation in models 1 and 2.

Table 2. Estimations for tests of the appropriate model selection

Types of Tests	Model 1 (Dep. Var: EVA-Ln)	Model 2 (Dep. Var: EVA-Ln)
F-test	6.43***	2.76***
B-P LM test (X2)	78.26***	55.01***
Hausman test (X2)	9.76	18.10
Breusch-Pagan/Cook Weisberg test (X2)	0.025	2.84
Wooldridge test	0.979	2.41

Notes: (i) ***, **, and * indicate the p-value is statistically significant at 1%, 5%, and 10%, respectively.

(ii) F-test refers to the F-test in a fixed-effects model.

(iii) The B-P LM test (X 2) refers to Breusch and Pagan's Lagrange Multiplier test.

(iv) The Hausman test (X 2) refers to the Hausman specification test.

Table 3. Summary of descriptive statistics for variables

Variables	No. of Obs.	Mean	Min	Max	Std. Dev.
Systematic risk (Beta)	264	0.5757932	0	1.78	0.3818835
Unsystematic risk (Std. Dev.)	264	0.1120506	0.026	0.3469142	0.0808487
Number of Board	264	8.844444	5	15	2.195323
Independence Board	264	0.2382307	0.05	0.6	0.1441085
number of meetings	264	6.208889	2	12	1.624563
Director's independence	264	0.373333333	1	0	0.484633099
Size	264	6.661648	3.8	8.48	0.9174641
Leverage	264	0.1435622	0	1.239175	0.1796287

Table 3 summarizes the descriptive statistics. First, dependent variables: Systematic risk (Beta) averaged 0.576 and standard deviation 0.382 Unsystematic risks (Std. Dev.) averaged 0.11 per cent, with standard deviations of 0.082, respectively. Second, Board Characteristic: The average board size was 8.84 members, independent directors were 0.238 per cent of boards and the average number of meetings was 6.21. The Director's independence averaged 0.373.

Table 4. Pearson correlation matrix

Variables	Systematic risk (Beta)	Unsystematic risk (Std. Dev.)	Number of Board	Independence Board	number of meetings	Director's independence	Size	Leverage
Systematic risk (Beta)	1							
Unsystematic risk (Std. Dev.)	0.380***	1						
Number of Board	0.176*	0.371***	1					
Independence Board	0.120	0.055	-0.012	1				
number of meetings	-0.021	-0.121	0.182**	-0.209***	1			
Director's independence	0.024	0.022	0.261***	0.375***	-0.073	1		
Size	0.013	-0.129	0.10	-0.330***	0.201**	-0.291***	1	
Leverage	0.343***	0.181**	0.302***	0.102	0.332***	0.091	-0.149*	1
VIF			1.89	2.21	1.72	1.41	3.24	2.89
TOL			0.521	0.489	0.599	0.810	0.499	0.399

Table 4 shows that Director's independence and Size have a weak positive correlation with systemic risks and several meetings have a weak and negative correlation with systemic risks, as Table 4 shows that Independence Board and Director's independence have a weak and positive correlation with unsystematic risks. The table also shows the correlation coefficients (positive/negative) across the variables less than 0.64 in the matrix,

indicating that there is no severe linear problem. Table 4 also shows that the variance inflation factor (VIF) and the statistics for tolerance (TOL) have the highest values of 3.24 and 0.912, respectively, confirming that the data set is devoid of multicollinearity (Table 5).

Table 5. Random-effects regression estimations: CGMs as the drivers of SV

	Model 1 Dependent variable: Systematic risk	Model 2 Dependent variable: unSystematic risk
Chi ²	50.5	175.1
Prob > Chi ²	0.0001	0.0000
R ² (within/between/overall)	0.658	0.677
No. of observations	264	264
Number of Board	0.021 (0.01)	-0.008 (0.000)
Independence Board	0.1831 (0.0424)	0.0373 (0.0226)
number of meetings	0.0995 (0.0325)	0.059 (0.0013)
Director's independence	-0.0218 (0.0035)	-0.0018 (0.0003)
Size	0.6042 (0.1517)	0.0056 (0.0162)
Leverage	-0.0065 (0.0089)	-0.0002 (0.0011)

It is clear from Table 6 that it has a statistically significant relationship with Systematic risk, and we reject the hypothesis that there is no effect of governance mechanisms (characteristics of the board of directors) on systemic risks. This result indicates that the number of boards as a corporate governance mechanism contributes to reducing systemic and non-systematic risks. Similar to Swami (2011) and Matari et al. (2012), Models 1 and 2, however, reveal consistent results with the results for systematic risk and non-systematic risk in that there is a statistically significant positive effect of the Number of Board on regular risk and nonsystematic risk at $p < 0.01$ and $p < 0.000$, respectively, so We reject the hypothesis that there is no effect. The results also indicate that the Independence Board acts as a driving force in the impact of reducing systemic and irregular risk in the market and the company, as measured by beta and standard deviation. Again, a statistically significant effect of several meetings on regular risk and disorganised risk was reported in Models 1 and 2. Therefore, these results reject the hypothesis of no effect. The results also indicate that there was a statistically significant negative Director's independence effect on systemic and non-systemic risks at $p < 0.0035$ and $p < 0.0003$, rejecting the hypothesis that there was no effect. This result indicates that the independence of directors is a governance mechanism that increases the systemic and informal risks if the directors are not independent. The study reveals that Size is not statistically significantly associated with systemic and non-systemic risk,

as reported in Model 1 and Model 2. Thus, this result accepts the assumption that size has no effect on systemic and informal risks, which contradicts the study of..... This result indicates that the size of companies as a controlling variable is not one of the mechanisms of governance. Models 1 and 2 show evidence of Leverage’s statistically significant negative effect on regular and non-systemic risk at $p < .0089$ and $p < 0.0011$, respectively. Thus, these results also reject the hypothesis that debt does not affect risk, as the researchers explain that the higher the financial leverage, the higher the risk.

Table 6. Random-effects regression estimations: CGMs as the drivers of SV after alternative measurement of companies’ size

	Model 1 Dependent variable: Systematic risk	Model 2 Dependent variable: unSystematic risk
Chi ²	60.15	138.69
Prob > Chi ²	0.0002	0.0000
R ² (within/between/overall)	0.72	0.76
No. of observations	264	264
Number of Board	0.032 (0.001)	0.042 (0.010)
Independence Board	0.542 (0.0021)	0.0373 (0.0013)
number of meetings	0.4521 (0.0021)	0.059 (0.0031)
Director's independence	-0.532 (0.0001)	-0.965 (0.0002)
Size	0.7215 (0.0105)	0.0056 (0.010)
Leverage	-0.0102 (0.001)	-0.0002 (0.0095)

Sensitivity and Durability Check

The sensitivity of the main results to the proxy measure of the firm’s size variable—initially triggered by the natural logarithm of total assets (Size-Ln) in the sample during a fiscal year—was validated, and all regressions restarted. The results shown in Table 6 are similar to the main results.

Table 7. FGLS regression estimations: CGMs as the drivers of SV

	Model 1 Dependent variable: Systematic risk	Model 2 Dependent variable: unSystematic risk
Chi ²	87.72	150.70
Prob > Chi ²	0.000	0.000
R ² (within/between/overall)	264	264
No. of observations	0.752 (0.004)	0.21 (0.0009)
Number of Board	0.552 (0.0252)	0.298 (0.0012)
Independence Board	0.49 (0.0043)	0.15***(0.0003)
number of meetings	0.6231 (0.0011)	0.19 (0.0024)
Director's independence	0.165(0.001)	0.51 (0.0014)
Size	0.777 (0.0057)	0.246 (0.00185)
Leverage	- 0.112 (0.00568)	- 0.1651 (0.0059)

The original results were also confirmed using an alternative regression model, a feasible generalized least squares (FGLS) regression model at the heteroscedasticity point and AR(1) autocorrelation within the panels, to ensure their robustness. The results presented in Table 7 are consistent with the original. In general, the results are consistent with the main findings.

6 Discussion

It is clear from the results of the two models that were tested that governance mechanisms (characteristics of the board of directors) play a driver in risk management, resulting from the risks to which the company is exposed (unsystematic risks), and market risks (systematic risks). This study shows that only one mechanism of corporate governance, which is the presence of board meetings or the independence of directors, or the size of the board, or the independence of the director, acts as a real driver in managing risks and working to reduce them to the lowest possible level. The positive finding of manager independence, director independence, board size Management and several meetings help disseminate impartial accounting information promptly to shareholders, resulting in lower risk of agency costs and information asymmetries, and thus creating shareholder value. One reason may be that the board members have extensive experience in the outside business environment, which makes them able to bring in diverse knowledge and skills and create business contacts from different backgrounds. The result of the independent non-executive directors can be explained by the fact that

they were chosen from individuals who have no social or family ties to the group of controlling shareholders. Thus, it is possible that they played a vital role in the board of directors and made independent decisions.

7 Conclusion

The results show that governance mechanisms (characteristics of the board of directors) have a positive relationship with risk management, because of the independence of the board of directors, the independence of managers, the number of board meetings and the number of board members, who tend to apply more efficient and effective measures to enhance the company's management through disclosure, transparency and independence of several members. The board of directors and managers, are working to reduce the levels of risk through good management of the company and its work in the market, which in turn will be reflected in the company's continuity and profitability. The other result is that the characteristics of the board of directors also have a positive relationship to raising the returns of stocks, and this is as mentioned earlier because of the better understanding and information that foreign investors have compared to local investors and because the Palestinian Stock Exchange is a relatively new market. Most of the traders in this market are less experienced than foreign investors. The final result is that the board of directors' characteristics positively impact risk management and work to reduce it by the company's management. According to the researchers, this is due to the development in the application of the concept of governance in Palestine over time, and this focuses on the decision-making process either in a group that has experience and competence in the concept of risk management. This reflects positively on investor returns.

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
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The Issue of Providing State Guarantees on a Portfolio Basis by the Legislation of Ukraine

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Abstract. The article is devoted to the place determining of the state in legal relations that are new for Ukraine, and, on the one hand, which are aimed at supporting the state's economy, reducing the state debt, and, on the other, at attracting funds to the state budget: state guarantees on a portfolio basis. Also, the article is dedicated to the determination of the subject composition of the specified legal relationship. In order to balance private and public interests, the attention was drawn to the need to change the approach of banks to their customers during crisis events, such as a full-scale war, since the lack of funds from business entities can lead to an aggravation of hunger as a world problem. The article proposes the ways to improve legislation both at the international and national levels.

Keywords: State guarantees on a portfolio basis for loans · State guarantee · Public funds · State Budget funds · State debt

1 Introduction

Each state is looking for new mechanisms for attracting resources to public funds, thus, during the times of crisis. In addition to the global financial crisis and the COVID-19 pandemic, more severe trials beset Ukraine. In 2014, it was the annexation of the part of territories of our state, and, from February 2022, the active phase of Russia's war against Ukraine. It is no secret that after the end of the war, the state is faced with the problem of population impoverishment, loss of land fertility and hunger. Therefore, it is time to investigate the state programs aimed at supporting the state's economy, reducing the state debt, and involve attracting funds to the state treasury. One of these programs is the program of providing state guarantees on a portfolio basis (next – state guarantees), introduced in Ukraine in 2020. It is characteristic of the state guarantee on a portfolio basis that the state partially guarantees the fulfillment of obligations to the bank not of a specific business entity, but of a portfolio of credit obligations at the level of 80%. Since the mentioned relations are new for Ukraine, there are no comprehensive scientific studies in our country in the indicated area, therefore it is urgent to study the relevant social relations; to determine their subject composition, to highlight the place and role of Ukraine in these legal relations, thus, during crisis events; to correlate the private-law and public-law aspects of relations in the field of providing state guarantees; to identify

the gaps in legislation, to develop proposals for improving the legislation in this area at the international and national levels.

2 Source Review

H.P. Bortnikov found the subject for the research in the issue of the prerequisites for the introduction of the institute of state guarantees in Ukraine, as well as the experience of some European states in the field of providing the specified type of guarantees [1, p. 75–90]. J.F. Navrotskyi noted in his work the use of the mechanism of state guarantees for the development of the agricultural machinery market [2, p. 24–26]. General issues regarding the types of guarantees were investigated in the work of Bruno Robino [3]. At the same time, the authors found useful the works of scientists who studied the issue of financial and legal regulation of the state guarantees: L.K. Voronova, S.O. Nischymna [4, p. 255–290], O.O. Dmytryk and K.O. Tokarieva [5, p. 53–61], V.O. Radins'ka and S.V. Nef'odov [6].

It is scientifically determined that the state guarantee in the form of raising funds is one of the forms of state debt, therefore scientific works in the field of public debt are also investigated, thus, Davide Furceri, Prakash Loungani, Jonathan D. Ostry and Pietro Pizzuto (studied the general issues of managing and maintaining public debt at an appropriate level with minimal losses to the country) [7], Ludger Schuknecht, Anthony J. Makin (investigated the rise in global public debt as a result of the fiscal response of EU governments around the world to the COVID-19 crisis) [8]. In 2007, I. Zaverukha conducted a comprehensive study of the public debt management within the framework of the study “Legal Regulation of the Public Debt of Ukraine”. During this time, there were changes in state policy, global financial crises occurred, the active phase of the war began, therefore the issue of legal regulation of public debt management is relevant [9].

3 Purpose of Study

The purpose of the article is to study social relations in the field of providing state guarantees, to identify the subjects participating in the specified relations, to investigate the practice of applying the relevant legal norms, to single out the problematic issues and to propose the ways of improving the legislation in the specified field.

4 Methodology

The methodological basis of the research consists of a set of philosophical, general scientific and special approaches, principles and methods of scientific knowledge. Thus, dialectical, formal-logical, structural-functional, formal-dogmatic methods, as well as the method of system analysis, synthesis and others were used during the research. Thus, in order to assess the quantitative characteristics that illustrate, on the one hand, the interest of creditor banks and, on the other hand, the amount of state aid to sectors of the economy, a statistical method was used. Based on real knowledge, personal observation, processing of publications and data from the Ministry of Finance of Ukraine, certain

aspects of providing state guarantees were studied. The main provisions and conclusions are based on the study of domestic and foreign scientific literature, as well as the legislative acts.

5 Discussions

In 2020, during the period of the COVID-19 pandemic, our state introduced a new mechanism that, on the one hand, attracted funds to the State Budget of Ukraine (hereinafter referred to as the SB), and on the other hand, supported micro, small and/or medium-sized enterprises, residents of Ukraine (hereinafter referred to as business entities), and provided the state guarantees [10]. The legal mechanism for providing state guarantees is defined by the Budget Code of Ukraine [11] (hereinafter BC) and Government resolutions “Some issues of providing state guarantees in 2020” [12] (hereinafter Resolution-2020), “Some issues of providing state guarantees” [13] (hereinafter Resolution-2021). In 2022, the Resolution-2021 was amended due to the war and the negative consequences that the war brought to Ukraine. Thus, the list of individuals whose obligations to creditor banks can be guaranteed by the state portfolio guarantees has been increased to farmers for sowing [14], extended the state guarantee program on a portfolio basis not only for the loans granted by banks, but also for loans granted by the Entrepreneurship Development Fund, therefore, it is extended to entities that use state support under the 5-7-9 program [15].

“The credit guarantee mechanism, on the one hand, enables entrepreneurs to attract financing that is several times higher than their available pledge, on the other hand, it enables banks to share with the state the risks associated with financing SMEs, stimulating the development of this business segment” [1, 78]. Therefore, the provision of state guarantees differs from the relations of state guarantees as well as from the relations of bank lending with the compensation of obligations partly at the expense of budget funds (budget lending). In the legal relationship of the provision of state guarantees, there is a combination of public law (we are talking about public funds - SB funds) and private-law regulations (banks’ credits for business entities).

The public-law aspect of the legal relationship of providing state guarantees is manifested in the subject structure. Thus, the state directly belongs to the subjects of public law as the Guarantor and as the owner of the funds of the SB of Ukraine. The state in relation to the provision of state guarantees is represented by the Parliament, the Government and the Minister of Finance of Ukraine (until the election of the Head of the Debt Agency of Ukraine). It should be noted that it is the Minister of Finance of Ukraine on behalf of the state enters into legal relations with creditor banks. The legal act certifying the existence of legal relations between the Guarantor and the creditor bank is a concrete contract of the provision of a state guarantee on a portfolio basis. The Antimonopoly Committee of Ukraine, the State Treasury Service of Ukraine, and control bodies – the State Audit Service of Ukraine and the Accounting Chamber of Ukraine belong to the public entities that participate in these legal relations, but whose powers are not registered in the Resolution-2020 and Resolution-2021. Thus, the Antimonopoly Committee decides on the admissibility for competition of the relevant state aid, therefore its legality [11, Part 4 Art. 35; 16, clause 8 Art. 1]. The relevant decision

[17] was adopted by the specified entity on 04/22/2021. The State Treasury Service of Ukraine provides treasury service of State Budget funds [11, Art. 43]. As an example, it should be noted that “Southern Bank” and “International Investment Bank” did not sign contracts and were dropped from the Treasury’s list for 2020 [18].

The joint-stock company “State Export-Import Bank of Ukraine” (hereinafter Ukreximbank) acts as an agent in the legal relations of the state guarantees. It should be noted that Ukreximbank acted as an agent in other programs “servicing foreign loans received under the guarantees of the Cabinet of Ministers of Ukraine” [4, p. 256]. The legal form certifying the relationship between the state and Ukreximbank as an agent is the “Agency agreement concluded between the Guarantor and the agent on 12.23.2020” [13]. The Agent’s powers include the preparation of a decision on the possibility of providing appropriate guarantees by the state, carrying out activities to identify loan discrepancies, checking the reports of creditor banks regarding the condition of granting, repayment and servicing of loans within the framework of loan portfolios, controlling the total amount of the share of the loan portfolio of creditor banks, the amount, determined by the parliament in the law “On the State Budget” for the relevant year [12, 13, 19]. From the analysis of the norms of Resolution-2020 and Resolution-2021, it can be concluded that Ukreximbank, as an agent of the state, acts on its behalf and in the interests of the state. However, Ukreximbank does not act at the expense of the state, the funds of Ukreximbank are paid by creditor banks for its performance of the functions of an agent. Thus, banks pay a one-time commission for the preparation of a guarantee (in the amount of 0.05% of the guarantee limit, including VAT) and a commission for the management of the guarantee (at the rate of 0.25% of the annual amount of guaranteed obligations from the principal debt at the end of the calendar month in accordance with the register, including VAT). The agreement method is used in the relations between the Agent and the Guarantor. So, it can be noted that Ukreximbank, as an agent of the state, acts under the control of the state. At the same time, the legal analysis of the Regulation-2020 and Regulation-2021, taking into account the provisions of the standard contract, confirms the absence of norms that would regulate the issue of “conflict of interests”, since Ukreximbank, on the one hand, acts as an agent of the state, and, on the other hand, it acts directly as a creditor bank.

Subjects of private law, which participate in the relations of providing state guarantees, include creditor banks and business entities, the requirements of which are determined by the Procedures for providing state guarantees. Strict requirements for banks are conditioned the need to ensure the efficiency and economic expediency of using budget funds, directing them to those programs that have a greater economic profit. Determining the appropriate conditions for banking institutions, the state ensures equality, transparency, openness of participation in the specified legal relations of those entities that meet the requirements identified in Clause 6. Granting the bank the right to participate in the program of state guarantees, the state determines for each specific bank the maximum amount in hryvnias that will ensure partial fulfillment of debt obligations under the portfolio of loans. Thus, the Government’s decision determines the list of banks that, according to the Agent’s opinion, meet the requirements for providing state guarantees. To calculate the limit volume, it is taken into account the indicators of the total amount of liabilities for the principal debt for the loan portfolio of the creditor bank

(should not exceed 50%) and for each individual loan. As a rule, it should not exceed 70%. The exceptions concern, firstly, with the loans for the purchase of agricultural land (must not exceed 50% of the outstanding amount of the principal debt for each individual loan). Secondly, with the loans for farmers during martial law (no more than 80% of the total amount of obligations for the principal debt for the loan portfolio of the creditor bank, as well as for each individual loan).

The state guarantees the fulfillment of the obligations not of any economic entity, but of entities that belong to residents of Ukraine, that are entities of micro-enterprise, small and/or medium-sized enterprises, which “do not have sufficient security for creditor banks” [17], who “suffered losses due to the introduction of quarantine restrictions and overcoming their consequences caused by the respiratory disease COVID-19 caused by the coronavirus SARS-CoV-2” [17], and today we can talk about the negative consequences of the war, as well as those engaged in activities for which there is no ban on receiving state aid and/or receiving state guarantees. Therefore, the state clearly defines those entities in respect of which a decision can be made to provide state guarantees. At the same time, in order to ensure the protection of bank secrecy, creditor banks provide information about their borrowers in the form of a corresponding loan portfolio without specific identification of the specified entities.

As mentioned above, the state is gradually increasing the entities that are supported through the application of the mechanism of state guarantees. For each groups of entities-borrowers of banks, the state determines the target purpose of the corresponding state guarantee on a portfolio basis. So, business entities have the right to receive a corresponding guarantee only if the loan is provided by the bank to finance investment projects and investment goals, working capital and refinancing of the business entity’s debt. Separate requirements are defined for entities wishing to purchase an agricultural plot of land and for farmers.

From December 2020 to June 2022, 12,729 loans were issued for a total amount of UAH 39,830 billion [20]. Summary statistics of the provision of state guarantees under the 2020 Program are shown in Table 1.

During the war, loans for agriculture prevailed. In January 2022, 5 banks took part in the Program-2021, in February – 11, in March – 12, in May – 24, in July – 27 [20, 23, 25–27]. Accordingly, the loan portfolio increased from 33% (UAH 12.014 billion) in February to 73% (UAH 35014 billion) in May. Therefore, the obligation under the principal debt, which is partially secured by a guarantee, increased from UAH 3.950 million in February to UAH 25,468 billion in May. At the same time, 8,057 loans (89%) were granted under the 5-7-9 program in February, and 7,997 (65%) in May.

Anyway, this statistic increased due to the allocation of funds by creditor banks for sowing according to the Resolution of the Government of Ukraine “On Amendments to the Resolution of the treasury dated July 14, 2021. № 723” [14]. Thus, 5,201 loans were issued in the amount of UAH 23,766 million, covering 60% of all loans [20], provided in the period from 03/28/2022 (date of entry into force of the resolution). From March to May 2022, banks issued only 576 loans for agriculture (excluding funds for sowing). Also, the data for May show that the geography of lending has changed, so Odesa region took the first place, comparing to 5th position in February, Kirovohrad region - 15th, Dnipropetrovsk region - 2nd, Kyiv region - 9th [25]. Owing to the support of the state,

Table 1. Statistics on the provision of state guarantees under the 2020 Program

	Data from Ministry of Finance of Ukraine from		
	April 2021 [21]	November 2021 [22]	January 2022 [23, 24]
Number of participating banks	6	11	11
Number of loans granted	891	2175	2652
Loan portfolio	UAH 1,193 m	UAH 6,5 bn	7,35 bn
Interest from the limit	15% (UAH 3,93 bn)	73% (UAH 3,93 bn)	81% (UAH 3,93 bn)
Regions with loans under guarantees (number of loans granted), amount	Volynska oblast – 110, Dnipropetrovska obl. – 109, Odeska obl. - 83	Kyiv – 188 (UAH 795 bn); Lvivska obl. – 141 (UAH 378 m); Dnipropetrovska obl. – 137 (UAH 404 m)	Kyiv – 243 (UAH 1,042 bn); Lvivska obl. – 196 (UAH 446 m); Dnipropetrovska obl. – 185 (UAH 442 m)
Types of economic activity for which banks provided loans	Wholesale and retail trade; repair of motor vehicles and motorcycles (further - WRT, RMVM) – 432 (36% of the total volume of loans issued); agriculture (further – Agr.) - 288 loans (24%), processing industry (further - PI) - 173 (15%)	WRT, RMVM – 760 (UAH 2,07 bn); Agr. – 594 (UAH 2,01 bn); PI – 337 (UAH 1,48 bn)	WRT, RMVM – 998 (UAH 2,4 bn); Agr. – 664 (UAH 2,15 bn); PI – 418 (UAH 1,66 bn)

Source: authors' (developed by the authors based on [21–24]).

“farmers from Odesa and Dnipropetrovsk regions threshed more than 2 million tons of grain each, 5 other regions exceeded the million mark of grain collection” [28].

However, the war showed that banks were “reluctant” to enter into legal relations with farmers. Thus, “banks refused to lend to farmers from Mykolaiv, Kharkiv, Chernihiv, Kyiv regions and other regions where hostilities took place or still taking place”, “as of April 7, Donetsk, Zhytomyr, Luhansk, Mykolaiv, Sumy, Kharkiv, Chernihiv regions received no credit under the “80% State Program of Portfolio Guarantees” and “continue to use peacetime principles in assessing clients’ risks” [29]. Apparently, this is a question not so much for the banks of our country, but for international institutions that are trying to solve the food crisis. Will the impossibility of the agrarians of the “granary of the world” to obtain loans from banks for sowing in the following post-war years lead to an aggravation of the problem of hunger, taking into account that banks will be guided by norms regarding the prevention of risks in their activities?

6 Conclusions

Despite the difficult economic situation in Ukraine, the de-occupation of the territories of independent Ukraine, the COVID-19 pandemic, a full-scale war, our state is trying to support micro-, medium and small businesses, including farmers, by introducing various support programs. Thus, at the end of 2020, the program of providing state guarantees on a portfolio basis began to operate in Ukraine. It is characteristic of the state guarantee on a portfolio basis that the state partially guarantees the fulfillment of obligations to the bank not on a specific economic entity that lacks funds, but on a portfolio of credit obligations at the level of 80%. The State as the Guarantor and as the owner of the State Budget funds in these legal relations is represented by the Parliament, the Government, the Minister of Finance of Ukraine authorized to enter into agreements with creditor banks and the Agent - Ukreximbank. In this legal relationship, Ukreximbank acts in two roles. Firstly, it is an Agent, an entity that acts on behalf of the state preparing materials for the possibility of allocating funds from the State Budget of Ukraine to the corresponding bank, and, secondly, it is directly a creditor bank that receives the specified funds. However, there are no regulations in the legislation that would regulate the issue of “conflict of interests”.

During the martial law, the problem of protecting the interests of creditor banks (regarding the prevention of risks in their activities by banks) and protecting the interests of borrowers (lack of funds for sowing and other types of activities) become more acute. The war is still going on, the destruction and devastation on the territory of our country are increasing as well as the list of business entities that will need the support of the state and banks. Therefore, the question of changing the approaches of banks to their creditors is timely. Also, in our opinion, the obligations of farmers should be guaranteed for a longer period, since it is not possible to grow a crop and sell it at market prices within the period currently defined by the legislation.

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The Impact of Ownership Structure on Risk Disclosure: Evidence from Jordan

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Abstract. The current study seeks at inspecting the ownership structure's impact on risk disclosure. A data collection obtained from 39 firms listed on the Amman Stock Exchange (ASE) is analyzed using content analysis of annual financial reports, as the current study is conducted over 5 years (2016–2020). The outcomes of the multiple linear regression analysis indicate that institutional ownership, administrative ownership, and foreign ownership have positively impacted the risk disclosure. Besides, family ownership has negatively impacted risk disclosure. On the other hand, the results reveal no significant impact of directors' ownership and concentrated ownership on risk disclosure. It is worth mentioning that this study is applicable and gives much insight into the ownership structure's role in improving the financial reports' quality, alongside the risk disclosure's significance in increasing stakeholders' confidence in financial reports. In view of these findings, the efforts of regulators to develop further instructions and policies to ensure the reliability of the financial statements are encouraged.

Keywords: Ownership structure · Risk disclosure · Amman Stock Exchange (ASE)

1 Introduction

Given the significance of risk disclosure to curb the problem of information asymmetry and the decision-makers' reliance on information disclosed by firms, the extent of the ownership structure's impact on the nature of disclosures, and the reduction of conflict between management and stakeholders, corporate governance has emerged to reduce the difficulties associated with the conflict of the interests between the management and the owners, shareholders or stakeholders relating to it.

Thanks to many financial systems collapse and crises impacting the reliability and validity of financial statements and reports caused by the lack of disclosure and transparency, and the level of disclosure affected by the needs of stakeholders such as owners in their various forms, this work pinpoints the stakeholders' impact "Ownership Structure" on the risk disclosure level. Accordingly, the study problem revolves around the exposure of companies in general to risks, both financial and non-financial, including the industrial firms under study, and among these risks are liquidity and credit risks, natural disasters, wars, and others, negatively affecting the company's position and existence.

The significance of the study is demonstrated by highlighting the impact of the ownership structure with its different patterns on risk disclosure, which creates a positive impact on the industrial sector, the investors, and shareholders through taking appropriate decisions away from the information gap. In terms of transparency and clarity of presentation and disclosure, the ownership structure and the board of directors are among the key mechanisms that help in implementing corporate governance efficiently to reduce conflict in decisions. And so, the significance of the study rests in identifying the ownership structure's impact on risk disclosure, as this impact still needs more analysis in light of the Jordanian environment known by the ownership diversity.

Finally, this paper is divided into five main sections apart from the introductory section. The second section discusses the present literature and produces the research hypotheses. Third Section describes the study methodology. Section 4 discusses the empirical findings. Fifth section shows the conclusion.

2 Literature Review

2.1 Ownership Structure

The ownership structure has recently aroused the interest of researchers and those interested in public shareholding companies due to its effects on various aspects of the firms performance, as the behavior of investors is affected by the signals given by the difference and ownership structure's diversity. The composition of the ownership structure has become one of the effective tools in applying or unapplying the rules of corporate governance (Mosmah 2018).

Given the manifestation of the importance of the ownership structure on the companies' performance and its impact on the strength and success of companies to achieve the maximum possible profits and returns for shareholders, studies have emerged to study the quality of the ownership structure and its impact on the performance and continuity of companies. As the ownership structure is a necessity in determining the objectives of firms and the wealth of shareholders, both managers and shareholders shall have one goal reflected in the increase in the profitability of the company. Precisely, related studies have demonstrated that the nature of shareholders, i.e. the quality of ownership affects the performance of companies, and the structure of ownership affects the profitability of companies.

The ownership structure is a combination of the shares of a group of owners who have different interests and objectives and expresses those categories who own a share of the company's shares. The percentage of ownership of each category is determined by dividing the shares' number owned by this category by the total number of shares of a company (Makhlouf and Al-sufy 2018). In detail, ownership structure includes two dimensions; owner identity and ownership concentration. Furthermore, the difference in the right to vote and the right of capital enables shareholders to control the company with low participation in shares through several mechanisms, such as hierarchical structures and the presence of two categories of shares that allow large owners to control the company through voting rights, at the same time they retain a small share of ownership through rights of cash flow (Ghazi 2021).

2.2 Risk Disclosure

A high level of attention and interest is continuously given to risk disclosure in developed and developing countries thanks to the necessity to improve the transparency of the financial data, solve conflicts of agency, and deliver reliable annual reports. The contradictory results of past work and research papers open a new venue to explore the intervening variables affecting management behaviors and the association between risk disclosure and the company's value to study the association from numerous viewpoints, particularly those related to the board of directors members and those liable for disclosures. The board of directors' composition, i.e. the independence level increases the confidence of the stakeholders, moderates the asymmetries of the information among market contestants, and thus lessens risks (Makhlouf et al. 2018; Al-Kurdi et al. 2019).

Moreover, information asymmetry is mitigated by risk disclosure, increasing the company's value. Conversely, several firms, mainly those in developing countries, reject to elaborate on risk disclosure, arguing that most countries regard risk disclosure as a voluntary act, and such disclosures generally include sensitive data and information, putting their economic and business situation at risk. For that reason, the dispute between firms and venture capitalists concerning risk disclosure has stimulated the significance of the association between disclosures and the company's value in developing markets (Makhlouf et al. 2020).

Nonetheless, the desired goal of disclosure in the financial reports issued by companies is to transparently show the information and increase confidence by the relevant parties in the financial position of the company. It is noteworthy that disclosures have not attained sufficient consideration and attention by professional organizations, whether local or international organizations. For instance, local or international organizations have not developed an accounting standard that regulates and defines patterns of risk disclosure within companies, whether financial or non-financial, which is reflected in the disparity and gradation in the level of risk disclosure in the financial reports issued by companies (Al-Mallah 2018).

2.3 The Association Between Risk Disclosure and Ownership Structure

Habtoor et al. (2019) indicate that the existence of a strong influence of ownership structure on risk disclosure and that the degree and course of this effect depend on the category of the influence. It is also found that higher-owned government ownership and companies disclose much risk information, adding that firms with a high level of institutional ownership and family ownership incline to disclose less risk information, while the ownership of executives and the ownership of non-executive managers do not affect risk disclosure (Habtoor et al. 2019). The findings indicate that some controlling families are known by the same motives and characteristics for practicing risk disclosure. Furthermore, Saggat et al. (2017) indicate that the total number of keywords denoting positive risks exceeds keywords denoting negative risks. The following five related relationships are derived from the association between risk disclosure and ownership structure.

2.4 The Association Between Concentrated Ownership and Risk Disclosure

Concentrated ownership represents the ownership of major shareholders for each person, especially those who possess five percent or more of the capital of the firm. Concentrated ownership is one of the pillars that determine the behavior of senior management in making decisions related to the financial reporting process, including determining the nature and scope of the disclosed risk information in financial reports. Therefore, the senior management of companies is required to expand the scope and nature of the information disclosed in the financial reports to meet the disclosure requirements by major shareholders.

In the same context, the extent of the impact of concentrated ownership of major shareholders depends on three things, namely the voluntary disclosure's level of the non-financial risks, and maximizing the value of the company on the extent of the discrepancy between the rights of cash flows and the voting rights of shareholders. The impact of concentrated ownership leads to different techniques and methods of control over decisions based on reports submitted by senior management, including the company's issuance of shares, allowing the controlling owners to ensure control of the company through the voting rights they originally own. On the other hand, the voting rights of owners with a small ownership stake in the company may not affect the decisions made by the major shareholders. As said by Al Samadouni (2020), a negative association is available between voluntary disclosures of non-financial risks and concentrated ownership. However, Al-Bassam et al. (2018) support the existence of a negative association between the level of voluntary disclosure and the ownership of major shareholders. Therefore, Hypothesis No. 1 can be:

H1: There is a statistically significant impact between concentrated ownership and risk disclosure.

2.5 The Association Between Family Ownership and Risk Disclosure

Families signify a unique category of shareholders by owning financial portfolios characterized by the lack of diversity in the financial instruments held, and the long investment period resulting from these portfolios for the transfer of ownership to subsequent generations. Furthermore, families' control of institutional ownership may lead to effective control over all corporate activities, as family members are often motivated to better control their corporations.

In this take and give discussion, related studies indicate that the ownership-administration association results in reducing the costs of a traditional agency, improving performance and making long-term investment decisions, and preserving the reputation and identity of the company, thanks to the desire of families to pass on companies to future generations. Makhoul et al. (2018) show that families own 25% of the companies' shares, dominating a quarter of the board of directors' seats in the companies in Jordan, denoting that the characteristics of the board, i.e. the independence level) may chiefly impact the voluntary disclosure's level in risk disclosure. Likewise, in a survey study by Al-Samadouni (2020) comprising the hypothesis of the availability of a statistically negative and significant influence of family ownership on the voluntary disclosure's

level of non-financial risks, and after applying the study sample and analyzing it, it is concluded that the family ownership negatively impacts the voluntary disclosure's level of non-financial risks. Therefore, Hypothesis No. 2 can be:

H2: There is a statistically significant impact between family ownership and risk disclosure.

2.5.1 The Association Between the Ownership of Board Members and Risk Disclosure

The responsibility of the board of directors' members rests in attending the meetings, as it is the main element in the effectiveness of the directors' board. The board of directors meeting is an opportunity for the members of the board of directors to gather to discuss issues related to the company and is an important means of making effective decisions for the company. However, Al-Samadouni (2020) indicates the availability of an insignificant and positive influence of administrative ownership on the level of voluntary disclosure of non-financial risks, and there is a positive and important impact of the independence and size of the directors' board on the level of voluntary disclosure of non-financial risks.

Yet, the number of board meetings is one of the determinants of governance that has two conflicting sides regarding its effect on the risk disclosure level with a positive association between the number of board meetings and the voluntary disclosure level (Al-Samadouni 2020). On the other hand, Makhlouf et al. (2020) explain that the board of directors' independence has significantly contributed to supervising the association between risk disclosure and the value of the company. Therefore, Hypothesis No. 3 can be:

H3: There is a statistically significant impact between the ownership of the members of the board of directors.

2.5.2 The Association Between Institutional Ownership and Risk Disclosure

Institutional ownership is the investment bodies whose owners have usually experienced investors and have advantages in requesting and operating information and drawing better results compared to individual investors, resulting in less management exploitation of inside information to obtain more private gains at the price of other stakeholders. From the perspective of agency theory, institutional investment plays an important role in monitoring the management behavior that investors need in these companies to ensure the management's performance in their interests, as fulfilling the investors' desires gives management the right to excel, advance, and encourages it to be more transparent in the practice of disclosing public information and risk disclosure in particular.

Therefore, as put by Al-Samadouni (2020), a positive association is available between institutional ownership at the voluntary disclosure's level of non-financial risks. Likewise, Al-Bassam, et al. (2018) elucidate that a positive association is evident between the degree of voluntary disclosure, each of the institutional ownership, the size of the board of directors, and the audit committee, alongside the presence of a statistically positive

and significant association between the voluntary disclosure's level and the ownership of major shareholders. Additionally, Kamaruzaman et al. (2019) demonstrate that institutional ownership impacts the risk disclosure of firms in general. Therefore, Hypothesis No. 4 can be:

H4: There is a statistically significant impact between institutional ownership and risk disclosure.

2.5.3 The Association Between Foreign Ownership and Risk Disclosure

Foreign ownership is represented by the rights of shareholders who hold foreign nationalities and own a percentage of shares, entitling them to influence the results of companies' business. Besides, foreign ownership seeks to achieve the company's benefits and maximize its value to the extent that they have an effective supervisory role in the company, resulting to reduce administrative motives for opportunistic behavior that would harm the value of the company. Accordingly, Al-Meligy (2017) indicates that foreign ownership constitutes pressure on management to increase the volume of information that discloses risks to attract new investments due to the presence of a positive association between foreign ownership and risk disclosure. Therefore, Hypothesis No. 5 can be:

H5: There is a statistically significant impact between foreign ownership and risk disclosure.

3 Methods

3.1 Population and Sample Study

The study population comprises the entire (54) public shareholding industrial firms listed on the ASE. The exclusion of (15) companies is because of insufficient data, their merger, or liquidation. The data is collected by referring to the financial reports published and announced on the official website of ASE during the five-year period from 2016 to 2020.

3.2 Variables Measurement

The measurement method of the study variables is shown in Table 1.

Table 1. Measuring the study variables

Variable	Symbol	Measurement method
Concentrated Ownership	CO	The ratio of shares owned by major shareholders to the total number of shares
Family Ownership	FO	The ratio of the shares owned by the family to the total number of shares
Institutional Ownership	IO	The ratio of shares owned by corporations to the total number of shares
Ownership of Board Members	BO	The ratio of shares owned by members of the board of directors to the total number of shares
Foreign Ownership	FRO	The ratio of shares owned by foreign shareholders to the total number of shares
Dependent Variables		
Risk Disclosure	RD	Number of disclosed sentences expressing financial and non-financial risks in the Linsley and Shrivs Index (2006)
Firm Size	FSIZE	Company's total assets
Leverage	LEV	The ratio of total debt to total assets

4 Statistical Analysis and Hypotheses Testing

4.1 Study Variables and Descriptive Statistics

The results of the analysis of the descriptive statistics represented by the mean, the lowest value, the highest value, and the standard deviation are shown in Table 2. Importantly, these statistics provide substantial information about the nature of the study sample characterized by the Jordanian companies listed on the (ASE) from 2016 to 2020.

The findings of the dependent variable “risk disclosure” show that the mean of this variable is 0.325 with a standard deviation of 20%, indicating that the companies do not adequately disclose the risk indicators. Concerning the findings of the descriptive study of the independent variables, the findings related to the first independent variable represented by concentrated ownership show that the mean value is 0.61, as this ratio signposts that the majority of industrial firms in Jordan listed on the ASE are owned by major shareholders.

Relating to family ownership, the mean of this variable is 0.14, where the lowest value is 0.00, while the highest value is approximately 0.85, demonstrating that there is no concentration of any specific family members within the company. Concerning the results of the third independent variable, which is institutional ownership, the mean value is 0.43, as this percentage indicates that industrial firms in Jordan are owned by a large percentage of institutions, which designates the diversity in the study sample and the variation of companies. Pertaining to the fourth independent variable, which is the ownership of board members, Table 2 shows that the ownership of board members’

Table 2. Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max	VIF
RD	195	0.325	.209	0.000	1.000	3.812
CO	195	0.614	.251	0.057	0.987	3.215
FO	195	0.144	.205	0.000	0.846	2.163
IO	195	0.430	.325	0.000	0.987	1.418
BO	195	0.387	.273	0.000	0.974	1.253
FRO	195	0.153	.278	0.000	0.987	1.19
FSIZE	195	7.237	.616	5.556	8.633	1.074
LEV	195	0.336	.212	0.019	1.278	1.924

RD: Risk Disclosure, **CO:** Concentrated Ownership, **FO:** Family Ownership, **IO:** Institutional Ownership, **BO:** Ownership of Board Members, **FRO:** Foreign Ownership, **FSIZE:** Firm Size **LEV:** Leverage

mean in industrial firms in Jordan is approximately 39%. With regard to the foreign ownership, the mean of the ownership of foreign members who are shareholders in Jordanian industrial firms is approximately 15% as shown in Table 2.

4.2 Multiple Linear Regression Analysis and Hypotheses Testing

In a review of the diagnostic tests of the estimated model, it is found that the statistical (F) value is (120.55) with the probability value (0.000), which is less than the significance level of (0.01), demonstrating that the model is statistically acceptable and appropriate based on the significance of this statistic. However, the coefficient of determination's value or R-squared (R²) is (0.16), and this can be elucidated by the fact that the independent variables together explain an amount (16%) of the changes that occur in the dependent variable (risk disclosure). With that being said, this percentage is relatively acceptable in this type of study, as put by (Oroud 2019) (Table 3).

According to concentrated ownership, it is found that the statistical value (t) corresponding to the estimated coefficient is (0.050) and with a probability value of (0.966), which is higher than the significance level of (0.05). The absence of a association between concentrated ownership and risk disclosure can be justified because the ownership of these companies belongs to specific people, who are directly aware of these risks and have no desire to disclose these risks. This finding is consistent with the study (Sagar et al. 2017) confirming that the concentration of ownership in the hands of major shareholders has little effect on risk disclosure.

Concerning the regression analysis of family ownership and risk disclosure, it is found that the estimated value of the coefficient is (−0.387) with a probability value (0.003), which is a negative value with high statistical significance, indicating that family-owned companies do not pay much attention to risk disclosure confronting the company. This finding is consistent with several previous studies, as these studies found that family-owned companies tend to disclose and reveal less information about the risks that the

Table 3. Multiple linear regression analysis results

RD	Coef.	Std. Err.	P-value
CO	0.002	0.039	0.966
FO	-0.387	0.063	0.003
IO	0.151	0.017	0.001
BO	-0.067	0.031	0.101
FRO	0.161	0.010	0.000
FSIZE	0.034	0.009	0.022
LEV	0.008	0.023	0.740
_cons	0.678	0.069	0.001
R²	0.16	F	120.55 (<i>P</i> = 0.000)

RD: Risk Disclosure, CO: Concentrated Ownership, FO: Family Ownership, IO: Institutional Ownership, BO: Ownership of Board Members, FRO: Foreign Ownership, FSIZE: Firm Size LEV: Leverage

company may face. In this mood, Al-Samadouni (2020) indicates that there is a negative impact of family ownership on the level of voluntary disclosure of the risks. As detailed in the study by Makhoulf et al. (2018), the characteristics of the board of directors affect the level of voluntary disclosure in the risk disclosure in particular. Likewise, Habtoor et al. (2019) show that family ownership tends to disclose less information related to risks.

Concerning the hypothesis result for the independent variable represented in the ownership of board members and risk disclosure, it is found that the value of the estimated coefficient is (0.067 -) with a probability value (0.11), which is a negative value that has no effect. The absence of a association between the ownership of board of directors and risk disclosure can be justified by the unwillingness of the members of the board of directors to disclose the risks for fear of accountability by the rest of the shareholders. As shown by Al-Meligy (2017), there is a negative correlation with a significant significance between the ownership of the members of the board of directors and risk disclosure.

Regarding the analysis of the hypothesis of the association between institutional ownership and risk disclosure, it is found that the value of the estimated coefficient is (0.151) with a probability value of (0.001), which is a positive value with high statistical significance, indicating that corporate-owned companies are significantly interested in disclosing the risks faced by the company. The related statistical results confirm the presence of a statistically positive and significant effect on the percentage of institutional ownership on risk disclosure. This result is on the line with previous works that acknowledge that increasing the shares owned by institutions rather than individuals enlarges the risk disclosure in financial reports and prevents hiding them. As put by (Al-Samadouni 2020; Al-Bassam et al. 2018), there is a positive association between the level of risk disclosure and institutional ownership. In the same mood, Kamaruzaman et al. (2019) show the effect of institutional ownership on risk disclosure in general.

On the subject of the association between foreign ownership and risk disclosure, it is found that the estimated value of the coefficient is (0.161) with a probability value of (0.000), which is a positive value with high statistical significance, indicating that foreign-owned companies are significantly interested in disclosing the risks facing the company. This result indicates that the owners of foreign ownership are interested in risk disclosure due to the outcome of their experiences, and the diversity of their cultures in managing companies and risk disclosures. This result is consistent with previous studies such as Al-Meligy (2017), which concludes that foreign ownership constitutes pressure on management to increase the volume of information that discloses risks to attract new investments. It is also found that increasing the shares owned by foreign investors who have the expertise and tend to control the work of executive management increases the quality of financial reports, resulting in a rise in risk disclosures that companies may face.

On the topic of the control variable (FSIZE), the findings indicate that there is a positive and significant value at the significance level (0.05). About the second control variable (LEV) indicate that there is a positive value and not statistically significant.

5 Conclusion

In a nutshell, this study seeks at inspecting the ownership structure's impact, i.e. major shareholders, family ownership, board members' ownership, institutional ownership, executive management ownership, and foreign ownership) on risk disclosure. To achieve the study objectives, answer the study questions raised, and test the articulated study hypotheses, the descriptive statistics methods, namely: the cross-sectional time-series analysis (Panel Data) have been appropriately used.

Importantly, the findings thoroughly show the relationships between ownership structure and risk disclosure. The findings of the multiple linear regression analysis demonstrate that institutional ownership, administrative ownership, and foreign ownership positively affect risk disclosure, while family ownership negatively impacts risk disclosure. Conversely, the results reveal zero significant impact of concentrated ownership and the ownership of the board members on risk disclosure.

In light of the discussion of the results of the study, the study mainly recommends the decision-makers encourage investment by attracting foreign investors to be part of the ownership of Jordanian companies thanks to their knowledge and competence in managing companies, imposing effective control, and motivating companies investing in them to disclose risks. More importantly, the study recommends that decision-makers among investors use the indicators of the ownership structure in industrial firms when making future investment-based decisions.

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Board and Audit Committee Structure and the Quality of Corporate Environmental and Social Responsibilities Disclosures in Malaysian Companies

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Abstract. The objective of this paper is to study the relationship between five factors of board and audit committee characteristics and the quality of Corporate Environmental and Social Responsibilities Disclosures Environmental and Social Responsibilities Disclosures (CESRD) in Malaysian annual reports. Using a dataset from Bursa Malaysia main board, this study adopted content analysis method. Based on regression analysis with the five variables, mixed results were obtained. The results confirm that only two of the independent variables Bumiputra Muslim Controlled Board and Bumiputra Muslim CEO's ethnicity have influenced on the quality of CESRD. However, the impact of the three of variables, Bumiputra Muslim Chairperson of the board and Audit Committee, and Bumiputra Muslim controlled Audit Committee are found to be statistically not significant.

Keywords: The quality CESRD · Bumiputra Muslim · Annual reports

1 Introduction

There is an increasing attention on the issue of Corporate Social and Environmental Responsibilities (CSER) around the world by observers in the world of business and academia. One aspect of CSER that is viewed critically is its reporting. Many observers view that the traditional financial reporting fails to adequately capture the firm's CSER activities (Yongvanich and Guthrie, 2006; Darus et al., 2009). Therefore, Corporate Social and Environmental Responsibilities disclosure (CESRD) is a means of furnishing information on affairs between firms regarding social, environment, economics, and governance issues (Gray et al. 2001). In other words, it involves in delivering information on the social, economic, environmental, and governance setting either in the form of financial or non-financial. A comprehensive CESRD will thus offer valuable information to wide selection of stakeholders.

In emerging economies countries, including Malaysia the topic of CSER is principally imperative because CSER is still at an early development, transparency and disclosure among firms is comparatively still low compared to developed countries (Anuforo

et al., 2018; Darus et al., 2009; Esa and Ghazali, 2012; Fatima et al., 2015; Haji, 2013; Othman et al., 2011; Sundarasan et al., 2016; Thompson and Zakaria, 2004). Furthermore, the quality of information was considered at low level. Some of the reasons stated are the information was either non-disclosure or the information was laconic, more qualitative in nature, in turn, deficient in quantitative information (Bakar et al., 2019; Buniamin, 2010; Mutalib et al., 2014; Razak et al., 2022).

Therefore, the aim of this paper is to seek those determinants which are positively linked with the quality CSERD in Malaysian firms. The remainder of the paper is structured as follows. First, the review of literature. The discussion on the research methodology. Next, the research findings and discussion are presented. Finally, it ends with the conclusion and recommendation.

2 The Review of Literature

2.1 Corporate Environmental and Social Responsibilities (CSER)

CSER is a critical subject area in business ethics. So, what is CSER? Due to lack of consensus, there is no clear universal definition of CSER. Different authors have described it in a variety of ways. In the past, it has been a range of terms all evidently referring to the same process. So, we have corporate accountability, corporate citizenship, corporate ethics, corporate philanthropy, corporate responsibility, corporate social responsibility, corporate sustainability, sustainability, and triple bottom line. CSER is essentially the way in which businesses' decisions integrate social and environmental concerns toward the betterment of the society and a sustainable environment. In other word current concepts on CSER believe that firm relied on society for its continuous survival, going concern, and growth. If firms treat its community fairly, then the community probably have an optimistic impression of the firms (Singh and Misra, 2021).

2.2 Bumiputra Muslim Controlled Board and Audit Committee

It is well known that religion influences and imposes ethical behaviour among its adherences. For example, Islam lay emphasis on fairness, faithfulness, justice, truthfulness, and honesty on societies. In turn, these values also transpired in Islamism's financial and business practices. According to several scholars such as Badshah et al., (2013), Gray (1988) and Perera (1989), culture is one of the factors that influences of accounting practices. Hofstede (1997) has claimed that culture is the shared indoctrination of the mind which differentiates the members of one group from another, and oversees how persons recognise their responsibilities and discharge their duties. If culture shapes accounting practices than religion as one of the important components of culture may also has impact on accounting especially in Islamic societies. in Islam there is no separation of business affairs from religion, including accounting practices (Badshah et al., 2013; Perera, 1989). Based on a Hofstede–Gray theoretical framework, Mazzi et al., (2018) claimed that found that cultural qualities influence financial disclosures in different countries. It also determined the managers internal and external preferences of the choices financial reporting adopted in their companies (Mazzi et al., 2018). Muslim managers or board members come to recognise that they are held accountable to

their stakeholders besides liable to God in the afterlife; then, they take the necessary steps and actions to fulfil their accountability. Furthermore, Haniffa and Cooke (2005) stated that firms who boardroom or committee are controlled by non-Bumiputra Muslim are predicted to communicate less CSERD information compared to firms that are controlled by Bumiputra Muslim. Most of non-Bumiputra are non-Muslim. Conversely, Bumiputra Muslim, as Muslims, their way of life and thinking are influenced by their Islamic religion. Some of the values promoted by Islam are collectivism, law abiding citizen, subscribed to idea of social equality, and business ethics that valued transparency and full disclosure (Baydoun and Willett, 1995 and 1997; Gambling and Karim, 1991). Therefore, Bumiputra Muslim is predicted to communicate more CSER information and more transparent in business dealings (Haniffa and Cooke, 2002). Therefore, examining the role of Islam and Muslims in shaping disclosure practice is deemed promising. Thus, we hypothesises:

H1: There is a positive relationship between the proportion of Bumiputra Muslim controlled board and the quality of CSERD.

H2: There is a positive relationship between the proportion of Bumiputra Muslim controlled audit committee and the quality of CSERD.

2.3 The Ethnicity of CEO, the Board of Directors' Chairperson and Audit Committee's Chairperson

According to Khan et al., (2019) race or ethnicity as part of the components of culture acts an important catalyst in boards' conducts and disclosure practice of companies. It can be seen as one of valuable resources racial of a firm in achieving a competitive edge (Fitzsimmons, 2013; Khan et al., 2019). Each culture is different regarding to attitudes, principles, views, behaviours, and ethical tenets that influence companies' strategic decisions (Zhang, 2012). In addition, on personal level, Chuah (1995) suggests that the important factors that shape most of Malaysian managers' way of thinking are race, culture, and education. In turn it will influence their decision on companies' strategic decisions. Past literature on the impacts of ethnicity on disclosure practice give mixed result. The study done by Anifowose et al., (2017) in Nigeria showed that ethnicity impact negatively on the extent of disclosure. Rashid et al. (2012) investigate the influence of ethnicity on disclosure in Malaysia. Their finding shows that no significant relationship the ethnicity of boards members and disclosure practice of a company. However, two research done the same authors gives positive results of the linked between ethnicity and disclosure. In their studies on the effect of ethnicity on disclosure, Haniffa and Cooke (2002; 2005) claimed the existence of a significantly and positively relationship between Bumiputra Muslim controlled boards and disclosure. Haniffa and Cooke (2002) imply that Bumiputra Muslim directors are predicted to provide full disclosure as part of their religious duties and to conduct business in conformation to Islamic business ethics. Thus, we hypothesises:

H3: There is a positive relationship between the ethnicity of the CEO and the quality of CSERD.

H4: There is a positive relationship between the ethnicity of the Board's Chairperson and the quality of CSERD.

H5: There is a positive relationship between the ethnicity of the Audit Committee and the quality of CSERD.

3 Research Methodology

The data is obtained utilising the content analysis method from the annual reports of the sample of 347 firms listed in the main board of Bursa Malaysia. The annual report of these companies is the main source of data for this research. In accord with past CSER research annual reports and content analysis are used to measure CSERD (Buniamin, 2010; Amran and Devi, 2008). There are five independent variables and one dependent variable, tested in this study.

3.1 The Dependent and the Independent Variables of This Study

Past studies over accentuate on investigating the extent and type of disclosures only (Buniamin, 2010 and Guthrie et al., 2008). Yet, there has been deficiency of study that take into account the quality of CSERD (Buniamin, 2010). Therefore, the present study adopted a CSR disclosure index developed by Ghazali (2007) to measure the quality of CSERD.

The independent variables which represent five board structure variables outlined in Table 1. The table also presents the measurement of the variables of this study, both dependent and independent variables.

4 Results and Discussion

The results for our model of CSERD after the regression analysis are shown in Table 2 below. The regression produced R-squared of 0.346 and statistically significant. This suggests that the amount of variability in CSERD, as described by the variables, is about 34.6%. It is implied that our model R-squared is quite substantial has a reliable explanatory power. Our model is sufficiently robust which significant at 0.01 level with F-ratio of 36.018. All the values of the tolerance coefficient of are more than 0.10, while the VIF values are less than the threshold of 10.000, thus, indicating no intolerable multicollinearity in interpreting the regression results (Gujarati, 2003).

The study finds that Bumiputra Muslim Controlled Board (BPMBOD) has a significant and positive relationship with CSERD at one per cent level. This result does support H1, it is a confirmation that the greater number of Bumiputra Muslim boardroom members, the higher the tendency for firms to report on the CSERD in the annual report. The result is consistent with Haniffa and Cooke (2002 & 2005) findings. As reported by Haniffa and Cooke (2005), companies which boardrooms controlled by Bumiputra Muslim are expected to disclose more CSER information compared to other ethnic groups' controlled boardrooms. The motivation for such behaviour is that the boardroom directors are influenced by their own cultural values in their management principles. Consecutively, as Muslim, the BPM behaviours, normally adherence to the Islamic ethics and teaching. It is well known that Islam teaching subscribed to the idea of philanthropy and the full disclosure principle (Lewis, 2001).

Table 1. The independent variables and measurement

No	Variable	Variable acronym	Variable type	Measurement
1	Bumiputra Muslim Controlled Board	BPMBOD	Independent	The ratio of Bumiputra Muslim directors to total directors on the board of directors
2	The ethnicity of the Board of Directors' Chairperson	BODCHR	Independent	Board's Chairperson is a Bumiputra Muslim - 1 = Yes 0 = No
3	Ethnicity of CEO	BPMCEO	Independent	CEO is Bumiputra Muslim -1 = Yes 0 = No
4	Audit Committee controlled by Bumiputra Muslim directors	BPMAUD	Independent	The ratio of Bumiputra Muslim directors to total directors on the Audit Committee
5	The ethnicity of the Audit Committee's Chairperson	AUDCHR	Independent	Audit Committee's Chairperson is Bumiputra Muslim -1 = Yes 0 = No
6	Quality of Corporate Social and Environmental Responsibilities Disclosures	QCSERD	Dependent	CSERD Checklist by Ghazali (2007)

The finding on BPMCEO also gives the result as BPMBOD. This indicates the appointment of the Muslim CEO can promote the improvement of the quality of CSERD produced by the companies and support H3. The result is in lined with Al Arussi et al., (2009)'s finding. Muslim have the tendency to follow Islamic ethics such as integrity, trustworthiness, and transparency. Consequently, they have the tendency to fully furnished information concerning their firm's performance, and not neglecting the duties toward the society and the environment (Al Arussi et al., 2009).

The results of this study provide evidence that BPMAUD, BODCHR, and AUDCHR have no impact on the quality of CSERD. Audit Committee controlled by Bumiputra Muslim directors (BPMAUD) is found to be not significant and positively related to the quality of CESRD. This result does not support H2, which asserts that the higher the ratio of Bumiputra Muslim directors on the audit committee, more information on CSER will be provided. One of the explanations given by Alkdai and Hanefah (2012) is the numbers of members does guarantee that the quality of CESRD will improved. They further explained that that the type of Muslim membership is more important (i.e., independent directors) to boost the effectiveness of the audit committee's role (Alkdai and Hanefah, 2012).

Even though in the predicted directions of the linked between the variable BODCHR and the quality of CSERD is accurate but it is not statistically significant. So, the hypothesis H4 that the ethnicity of Boardroom chairperson linked to the quality of CSERD is not supported. This is an indication that the appointment of chairperson from BPM does not improve the quality of CSERD. This finding does not support the past studies done by Al Arussi et al., (2009) and Haniffa and Cooke (2002). Both studies maintained that the ethnicity has an impact to disclosure practice in Malaysia. Nevertheless, Al Arussi et al., (2009) finding related to the audit committee instead of board of directors.

Finally, the variable AUDCHR has also been found to be is not statistically significant. Furthermore, the relationship between the audit committee chaired by Bumiputra Muslim is negatively related to the quality of CESRD. This finding does not support H5. This finding showed that the appointment of Bumiputra Muslim. In audit committee of companies will not improve the quality of CESRD but lower the quality of disclosure of CESR information. As of the H4, this finding diverges form the past studies by Al Arussi et al., (2009) and Haniffa and Cooke (2002). These studies asserted that the ethnicity has an impact to disclosure practice in Malaysia. Therefore, H1 and H3 are accepted while H2, H4, and H5 are rejected.

Table 2. Multiple regression

Variables	Expected sign of coefficient	Standardized coefficient	t-value	p-value	VIF	Tolerance
(Constant)		0.286	17.921	0.000		
BPMBOD	+	0.161	3.225	0.001	5.813	0.172
BPMCEO	+	0.126	4.217	0.000	2.823	0.354
BODCHR	+	0.013	0.667	0.506	1.494	0.669
BPMAUD	+	-0.043	-1.016	0.310	2.834	0.353
AUDCHR	+	0.000	0.005	0.996	1.566	0.638
R2	0.346					
F-Test	36.018***					

*, **, *** = Significant at the 10%, 5% and 1% level respectively using a two tailed test

5 Conclusion and Recommendation

The aim of this paper is to explore the association between five of variables of boardroom structure and the quality of CSERD by Malaysia companies. It uses a content analysis procedure and disclosure score to explore the content of individual company annual report. The results for the sample of 347 firms listed in the Malaysian Stock Exchange verified that two of the determinants BPMBOD and BPMCEO are linked with the quality of CSERD in the predicted directions. Both these variables BPMBOD and BPMCEO are statistically significant at the one percent level.

On the other hand, the three of variables, BPMAUD, BODCHR, and AUDCHR are recognised to be not significant when regression analyses are executed. This study's results confirmed that to certain extent ethnicity do influence the quality of CSR. Therefore, looking into the facts, it can be concluded that board structure may be more successful and effective with combination of members with diversified ethnicity, culture, and gender, not just dominated by one culture or ethnic. It is what defined Malaysia as a country which rich with multicultural, religion, and ethnicities.

The findings of this current study should be considered with more care in view of several limitations. First, the data that was utilised in this research based on cross section analysis. Hence, a longitudinal analysis is more beneficial and productive that might help to uncover the trend of CSERD. Second, the study only examines the quality of CSERD. In the future, the study should investigate both quantity and quality of CSERD together to be more comprehensive result.




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Sustainability and Operational Challenges of Islamic Microfinance in Nigeria: The Case of Al-Hayat Microfinance Bank

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Abstract. Nigeria's economy is currently the largest in Africa and the world's 26th, with a Gross Domestic Product (GDP) of US\$600 billion (roughly N81 trillion) in 2017. Unfortunately, the prevalence of poverty in Nigeria is also growing. According to the World Bank estimate, poverty accounts for more than 70% of the population, implying that over 130 million people live below the poverty line. Microfinance is one of the most successful strategies for eliminating poverty since it provides access to financial resources that can assist in reducing poverty by fostering financial involvement and empowerment. Despite the fact that there are over 800 microfinance banks in Nigeria, their contribution to the country's economy is less than one percent. In addition, the basic objective of eradicating poverty has not yet been attained. Therefore, the extant literature has projected Islamic microfinance banks as a feasible solution to alleviate poverty in Nigeria, especially by looking at many Muslims in the country. Hence, Islamic microfinance banks continue witnessing minimal or no development in Nigeria. This study examines the obstacles impeding the growth of Islamic microfinance banks and their commercial viability. It also aims to provide solutions and recommendations to assist Islamic microfinance banks in regaining the public's trust by expanding their financial inclusion through various Islamic micro-credit products as a viable alternative to the existing conventional microfinance banks that offer high-interest loans. This study uses qualitative research techniques to fulfil its objectives. The data for this study were gathered using a semi-structured interview. The research reveals several regulatory concerns, such as licence processes and substantial paid-up capital, which is one of the most significant obstacles. Similarly, awareness, misconception, and compliance continue to be the most critical obstacles for IMFBS in Nigeria. Implications of the study for microfinance institutions, policy regulators, and recommendations have been provided in line with the main findings.

Keywords: Islamic microfinance · Poverty alleviation · Financial inclusion · Al-Hayat Microfinance Bank · Nigeria

1 Introduction

Nigeria is Africa's most populous country, with more than 200 million people. A GDP of US \$600 billion (i.e., approximately N81 trillion) makes Nigeria the largest economy in Africa and the 26th largest economy globally as of 2017. (World Bank 2018). However, unfortunately, poverty keeps increasing even faster than the population in Nigeria. According to the World Bank (2019) report, poverty accounts for more than 70% of the total, indicating that more than 130 million people live below the poverty line. The report concludes that Nigeria now occupies the second position in poverty capital worldwide after India.

Microfinance is one of the effective methods in combating poverty because it offers access to financial resources that can aid in poverty reduction by promoting financial engagement and empowerment. Microfinance is argued to be a worthy circle for breaking the poverty chain. Micro-credit infusion facilitates self-employment for the borrower and raises livelihood consumption, saving, and purchasing power. Many impact studies (El Hadidi 2018; Oluyombo and Ogundimu 2017; Seibel 2005; Srinivasan and Sriram 2003) show that microcredit enables recipient households to achieve a higher standard of living, better accommodation, a higher level of human growth, more assets, and a turn away from moneylenders. Several microfinance platforms have been established to combat the threat of poverty using conventional and Islamic microfinance. Despite several microfinance programmes, poverty remains a concern for Nigeria's government, the business sector, and non-governmental organisations (NGOs) since a large proportion of the population lacks access to financial services. The National Bureau of Statistics (NBS) (2020) statistics show that microfinance institutions in Nigeria support fewer than one million people out of a total of 40 million potential borrowers. Furthermore, in Nigeria, total microcredit facilities account for just 0.2% of GDP and less than 1% of total credit to the economy.

Therefore, Islamic societies, NGOs, and researchers in Nigeria have introduced Islamic microfinance banks (IMFB) as a feasible alternative to conventional microfinance. As a result, some Islamic microfinance banks were established in some states with a notable effect (Onakoya and Onakoya 2013). Nevertheless, some factors still delay the development of Islamic microfinance banks to expand all over Nigeria. Notwithstanding that, the existing literature has projected that Islamic microfinance banks are a feasible solution to alleviate poverty in the country. Several studies have been conducted on how Islamic Microfinance Banks (IMFB) can eradicate poverty in Nigeria (Olalekan Yusuf and Hakeem Mobolaji 2012; Oluyombo and Ogundimu 2017; Sodiq 2010). Some also analyse the existing framework of Microfinance banks in Nigeria (Dogarawa 2012) Mhammed and Hasan 2012; Noibi 2011). At the same time, some explore how Microfinance banks in Nigeria can improve micro-credit facilities and financial inclusion (Michael and Sharon 2014; Oyekolade Sodiq and Taofiki Ajani 2019; Oyesanyaa and Salako 2018).

The Al-Hayat foundation is situated in Ogun State, a state in the southwestern region of Nigeria. In February of 1976, the old Western State was renamed Ogun State. The southern, northern, eastern, and western boundaries of Lagos State are Oyo and Osun States, Ondo State, and the Republic of Benin, respectively. According to the World Population Review, Ogun State has a population of 4,864,322, including more than 2

million Muslims (2019). Oyesanya (2013) investigates Islamic microfinance organisations in the Nigerian state of Ogun, with the Al-Hayat Relief Foundation in the lead. He asserts that Al-Hayat was established to advance the path of the Islamic economic system on a case-by-case basis and through various help packages by offering interest-free loans to its registered members. The story notes that Al-Hayat has expanded to six states in Nigeria: Ogun, Lagos, Osun, Oyo, Ondo, and Kwara. Furthermore, he asserts that there are forty branches with over 6,000 members.

However, Islamic Microfinance Banks have witnessed minimum development in Southwest Nigeria, with only one Islamic microfinance bank located in Ogun state (Al-Hayat Microfinance Bank). Even with the current numbers of microfinance banks in Nigeria, it is disheartening to note that the lack of growth in these institutions has made it very difficult to notice their impacts on alleviating poverty in Nigeria, particularly Ogun-state with over two million Muslims (World Population Review 2019). Furthermore, Nigeria has fewer than ten Islamic microfinance banks out of a total of 800 microfinance institutions. Additionally, Islamic microfinance institutions in Nigeria continue to have minimal or no growth. Consequently, financial exclusion, lack of awareness, mistrust, the high cost of operating a unit microfinance bank (due to CBN capital requirements), liquidity pressure, insufficient human resources, and a lack of Islamic banking-based financial technology are likely the root causes of this low development, amongst other factors. (Dogarawa 2012; Gumel et al. 2014; Onakoya and Onakoya 2014). In addition, some individuals still lack confidence in microfinance institutions due to several other financial concerns.

Therefore, this study investigates the operational obstacles impeding the growth of Islamic microfinance institutions in Nigeria. It also aims to provide solutions and recommendations to help Islamic microfinance banks restore the public's trust by expanding their financial inclusion through various Islamic micro-credit products as an alternative to conventional microfinance institutions.

2 Literature Review

According to the CBN's Revised Regulatory and Supervisory Guidelines for Microfinance Banks in Nigeria, a microfinance bank (MFB) is defined as any company licensed by the CBN to engage in the business of providing various financial services such as deposits, loans, payment services, money transfers, and insurance services at micro-levels for households of poor and low income and their microenterprises (Central Bank of Nigeria 2005, 2012). These financial services include credit, savings, micro-leasing, money transfer, and payment services. In addition, microfinance is distinct from other formal financial products by the small loans and savings collected with no collateral and easy processes.

Similarly, Nwanyanwu 2011 described microfinance as a relatively basic framework that has been proven worldwide to empower impoverished people and alleviate them out of poverty. It can be concluded from the above definitions that microfinance is a poverty alleviation mechanism that provides credit and other financial resources for poor, low-income households and SMEs. Microfinance assists the vulnerable in increasing their wages, developing sustainable businesses, reducing exposure to shocks, and creating jobs to accomplish the goal of poverty alleviation (Yakubu et al. 2018).

Microfinance is an ancient cultural institution in Nigeria, extending back several centuries. Traditional microfinance organisations provide loans to rural and urban low-income households. They consist mainly of informal Self-Help Groups (SHGs), rotating savings and credit associations (ROSCAs), accumulating credit and savings associations (ASCAs), and borrowing directly from friends and family. In addition, savings groups and cooperative organisations provide microfinance services. However, informal financial institutions typically have a restricted reach due to a lack of funds and other micro-financial products to give to their consumers (Egboro 2015; Nwanyanwu 2011; Olomola 2002; Olujobo and Ogundimu 2017).

Seibel 2005 adopts a qualitative approach starting from the historical background of microfinance banks in Nigeria, development, and transformation, elucidating the government's impact on linking and converting all informal microfinance institutions into government cooperatives and formal institutions in the late '80s. The finding elaborates the linkage as a method with a long history in Nigeria, linking informal to formal financial organisations and self-help organisations to banks. Caxton-experience Idowu's "modernising" an Esusu in Ondo paved the way for broader replication in Lagos, where he had been elevated to the Registrar of Cooperative Societies status. Acha 2012 combined Esusu's rotating collecting and allocation of deposits with Ajo's doorstep savings collecting. Itinerant collectors paid by the bank gathered daily savings and deposited them as security for Esusu members' microloans. However, neither study explored the challenges affecting MFB's efficiency and performance during this early time.

Microfinance is regulated and overseen in Nigeria by the Central Bank of Nigeria (CBN), whose policy framework is specified in (Central Bank of Nigeria 2005) and updated by new regulatory guidelines (Central Bank of Nigeria 2012). A change to the supervisory and regulatory framework was implemented in (the Central Bank of Nigeria 2012) in an apparent effort to address noted flaws in the 2005 system. The updated framework is groundbreaking in its definitions of MFB target customer, micro-enterprise, and microfinance loan. Additionally, it covers acceptable and banned activities in an MFB and ownership and licensing requirements. The Board and Management of MFBs are also covered in fundraising, accounting, and associated problems.

Mohammed and Hasan (2008) conducted one of the earliest investigations on why conventional MFBs have not attained considerable financial inclusion and how Islamic MFBs may fill the space in the fight against poverty. The study used a qualitative methodology to depict Islamic MFB as a necessary alternative in the government's quest to alleviate poverty. The study concludes that the existing microfinance in Nigeria serves less than 1 million people out of 40 million, being the potential number that needs the service. Sodiq 2010 also finds that conventional microfinance institutions charge interest rates as high as 100% for lending and pay as low as 5% on savings and deposits. However, challenges such as share capital, awareness, and Islamic fintech hindering Islamic MFB from becoming a feasible alternative to conventional MFB need more study.

Al-Ameen 2016 studied the implementation of Islamic microfinance in Nigeria as a matter of equity and social justice, explaining why Muslims deserve an adequate Islamic microfinance system and how Muslims in Nigeria were marginalised from MF industries during the foundation and establishment of the section. The study discusses the need for an Islamic MFB for the Muslim community in Nigeria because several poor

and low-income Muslims in need of microfinancing cannot benefit from the government microcredit schemes. After all, the loan conditions contradict their faith. Still, Operational challenges delaying Islamic MBF from achieving sustainable financial inclusion need discussion. Additionally, Dogarawa (2013; Ishaq et al. 2020) critically review the NIFI guidelines and regulation and supervision of non-interest (Islamic) microfinance banks in Nigeria. The studies claim numerous provisions justify the application of Islamic banking and finance in Nigeria. However, these provisions need to be consolidated into proper legislation in a National Assembly Act that will adequately allow for the transparent operation of Islamic banking and finance.

Oyesanya (2013) examines Islamic microfinance organisations in Ogun State, Nigeria, particularly on Al-Hayat Relief Foundation. The study believes that Al-Hayat was established to encourage the provision of interest-free loans to its registered members, the application of the Islamic economic system on a case-by-case basis, and other support programmes. Al-Hayat has expanded to six states in Nigeria, including Ogun, Lagos, Osun, Oyo, Ondo, and Kwara, with over forty branches and a total membership of 6,000 people.

Adepoju and Oyesanya (2014) evaluate the poverty reduction techniques of the Al-Hayat relief foundation, highlighting a number of the organisation's accomplishments, such as the training of customers on Islamic financial literacy and the construction of the Yatwater plant. In addition, the establishment of Al-Hayat Microfinance Bank, the establishment of Al-Hayat Medical Centre Ltd, and several achievements in real estate allowed members to purchase plots of land by buying in bulk and allocating them to members with deferred payment, thereby contributing to the economic and financial activities of the country ("Achievements – AL-HAYAT RELIEF FOUNDATION," 2019). As a microfinance organisation, the study concludes that Al-Hayat Relief Foundation has been proactive in alleviating poverty among the Muslim population through several interrelated strategies. However, The Foundation needs more in-house study on all its investments and subsidiary (Al-Hayat micro-finance bank e.t.c.) on their challenges and prospects.

In 2014, the foundation established Al-Hayat Microfinance Bank Limited to extend its micro-credit facilities and expand its financial inclusion tactics beyond the organisation's members (Noibi and Adewole 2015; Salako and Azeez 2018). The major aim is to include non-NGO Muslims and non-Muslims in Ijebu-ode, Ogun State, and beyond in their mission and desire to alleviate poverty. Several studies, such as Adepoju and Oyesanya (2014), Bilqis (2012), and Salako and Azeez (2018), have identified and predicted numerous bank initiatives to promote sustainable financial inclusion in Ogun State. However, there have been minimal studies on the hurdles and difficulties limiting Al-Hayat Microfinance Bank (AMFB) from reaching its primary aims after 8 years of existence (Salaudeen and Zakariyah 2022). This study seeks to analyse and investigate these obstacles and to suggest viable solutions.

3 Conceptual Framework

This study examines operational challenges thwarting Islamic microfinance banks' sustainable financial inclusion, employing Al-Hayat microfinance bank in Nigeria as a

case study. Previous studies have observed that Islamic banks’ challenges are operational. The following diagram illustrates these challenges and opportunities for Islamic Microfinance in Nigeria (Fig. 1).

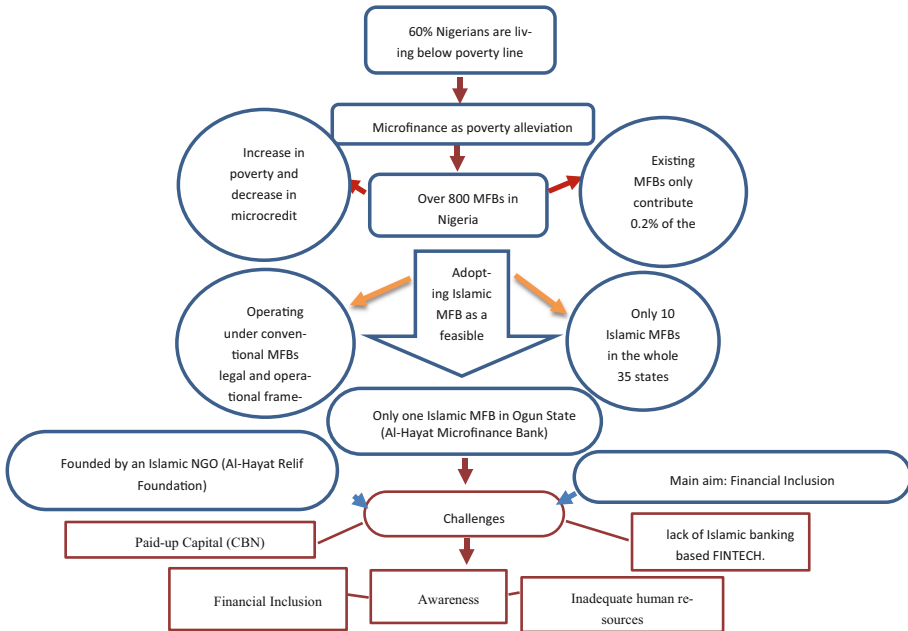


Fig. 1. Conceptual framework on IMF’s challenges in Nigeria.

4 Methodology

This study explored and fulfilled its objective through qualitative research techniques and was majorly based on primary data collection due to the limited research on Nigeria’s Islamic microfinance bank. Therefore, a purposive non-probability sampling technique is adopted. For data collection, a semi-structured interview was done. In this instance, five AMFB members were chosen, two from the board and three from the staff. Each informant got an email with a consent letter and recommended interview questions, to which they replied with their desired interview day and time. All respondents’ identities were encrypted, and English was the discourse language. All conversations were recorded and fully transcribed. In addition, data reduction, integration, and visualisation stages were adequately applied to analyse data efficiently (Table 1).

Table 1. Participant's profile: ID, position, educational background, and level.

Participants' id	Position at AMFB	Educational background	Level of education
SH1	Founding Member/Board member	Islamic studies	PhD
SH2	Board member	Islamic studies	PhD
BS1	High ranking officer	Accounting	MSc
BS2	Credit facilitator	Computer science	MSc
BS3	Marketing officer	Marketing	BSc

Source: Researcher's

5 Finding and Discussion

Several challenges impeding Al-Hayat MFB's financial inclusion, including operating licence, regulatory and supervisory framework, misperception, and Islamic fintech, as determined by the results originated from the analysed data.

5.1 Share Capital (One Unit MFB)

The Central Bank of Nigeria categorises Non-Interest Microfinance Banks (NIMFBs) into three categories according to their paid-up capital. This determines how many branches the bank can open, the capacity of its outreach, product and credit facility it can offer.

The CBN indicated that the guideline (Central Bank of Nigeria (CBN) 2017) would authorise three types of NIMFBs: a Unit NIMFB, which would be permitted to operate in a single location and would be required to have a minimum paid-up capital of N20 million. According to the amended criteria, the unit NIMFB is authorised to have a single branch outside the head office within the same Local Government Area, so long as it has at least N20 million in accessible free funds and meets the minimum prudential standards. AMFB belongs under the NIMFB category because it began with N20 million upon its inception.

BS1 mentioned AMFB's share capital as one of their significant challenges:

"Firstly, I want to say something that is hindering us: fund and share capital. We started with just N20 million because that was the requirement, but Al-Hayat is just trying its best to make it, but we need funds for us to be able to promote this Islamic finance. We have not attended to some applications because of funds, so funds are vital because we are limited."

The second classification is the State NIMFB, which is permitted to operate in a single state or the Federal Capital Territory (FCT) and must have a minimum paid-up capital of N100 million. The CBN indicated that this category will be authorised to open branches within the same State or Federal Capital Territory, provided the availability of unrestricted funds and prior to CBN authorisation of new branches or cash facilities.

The third kind, the National NIMFB, is permitted to operate in all federation states, including the FCT, with a minimum paid-up capital of N2 billion. This category is authorised to open branches in all federated states and the FCT, subject to the availability of free currency and prior approval by the CBN for each new branch or cash centre.

However, the Central Bank of Nigeria may periodically revise the mandated minimum capital requirements for each category of NIMFB (Table 2).

Table 2. CBN's categorisation of NIMFB

Category	Capacity	Branch	Capital (Naira)
1	A Unit NIMFB	Local government	20 million
2	State NIMFB	Single-state	100 million
3	National NIMFB	All states	2 billion

Source: Researcher's (Deduced from CBN's guidelines)

AMFB credit and financing product facilities are limited to their minimal capital share. The bank's determination to extend its outreach and open more branches. However, according to the revised guidelines, any Unit NIMFB may convert to a State NIMFB by surrendering its license and obtaining a State NIMFB license, subject to compliance with the licensing conditions specified in the guidelines. Likewise, a state NIMFB that wishes to convert to a National NIMFB must have at least five (5) branches scattered across the State's Local Government Areas. "This guarantees that the State NIMFB develops the required experience to operate a National NIMFB. Additionally, it will be compelled to renounce its State NIMFB license and comply with all other licensing requirements specified in the guidelines," the CBN stated.

In the process of expanding and opening more branches, SH2 affirmed the bank's effort toward this:

"The next thing for our expansion plan is share capital, as at that time (during the licencing), the Central Bank of Nigeria was requesting 20 million naira for share capital for a unit microfinance bank, and from Al-Hayat, we brought 30 million to start. This 30 million, 90%, belongs to Al-Hayat foundation branches and individual members. Insha Allah, before next year we will have raised N100 million; after that, we want to get that license, a full state-level Islamic microfinance bank."

AMFB are on the verge of getting both an Islamic licence and a state-level NIMFB. However, when asked concerning these encounters, if AMFB has reached out to other sources, specifically international Islamic financial institutions such as Islamic Development Bank (IsDB), Islamic Financial Services Board (IFSB), International Islamic Liquidity Management (IILM), for assistance and support. SH1 responded.

"We believe that before you ask people for help, you have to help yourself out first, and immediately we get that Islamic license, we are good to reach out, we are waiting to have the license, and that is why we have gotten enough share capital"

for the one unit Islamic microfinance bank and immediately we get the license we can now reach out to them.”

Furthermore, BS3 stated that AMFB has been familiarising and getting in touch with several international bodies:

“Firstly, we have attended several international conferences with Institutions from Malaysia, Pakistan, and the likes, and approached IFSB that we needed support. However, we are currently addressing our in-house issues such as license, adequate staff, e.t.c. Insha Allah, before next year we would have raised N100 million, and after that, we want to get that license, a full Islamic microfinance bank, from there we can reach out to other cooperation about what we are doing that they should assist us.”

5.2 Islamic Bank Operational License

According to (the Central Bank of Nigeria (CBN) 2017), Non-Interest Islamic Financial Institutions (NIIFs) must be licensed in line with the CBN’s current standards. Any application for a license should be supported by documentation of the promoters of the proposed institution entering into a technical agreement with an established and respected Islamic bank, financial institution, or Islamic cooperation such as the Al-Hayat relief foundation. The agreement shall expressly define the roles of the two parties and shall be in effect for not less than three years from the licensed IIFS’s commencement of operations (Dogarawa and Uthman 2019). This clause guarantees that licensed NIIFs receive technical assistance and experience from existing Islamic banks or cooperation to create such an institution since such expertise may lack the required skills.

The lack of access to an Islamic operating licence and processing setback has been the most significant hindrances for Islamic financial institutions. According to the Central Bank of Nigeria’s (CBN) Guidelines for Regulatory and Supervisory Of Non-Interest Microfinance Banks, published in 2017: “No individual, corporate, or their subsidiaries shall own or control any non-interest microfinance bank (NIMFB), except with approval and licence from the Central Bank of Nigeria.” However, obtaining an Islamic licence (Non-interest) is not feasible as a conventional licence. According to SH1 (Stakeholder), one of the foundation’s founding members (Al-Hayat Relief Foundation) established the microfinance bank with the primary objective of poverty alleviation and financial inclusion among and beyond the foundation through Islamic microcredit products. SH1 gave the following details during the interview on the licence issue:

“I’m one of the founding fathers of Al-Hayat Relief Foundation, an organisation that gave birth to Al-Hayat microfinance bank limited. In history, the Al-Hayat relief foundation started about 24 years ago, and right from its inception, it was part of our aim and objective to establish an Islamic bank, and that is our goal; we started thinking about how to achieve our goal. We know that our capacity cannot go for a commercial bank, so we decided to go for a microfinance bank, but it should be an Islamic bank; that was our aim and objective. So when we set out for the ambition, I was appointed committee chairman to establish a microfinance bank, the committee of seven. These people are the seven-man committee set up

by the Al-Hayat relief foundation, and they were working seriously on how to get the licence for operation. So the first thing we did was SWOT analysis to analyse the capability of the al-Hayat foundation at that time to establish a bank, but Alhamdulillah, after a year, we achieved it. Although we could not attain an Islamic microfinance bank license when we tried out all possible means, we could not move forward due to some political and social stigma. A suggestion came from a member of the CBN licencing committee - o you guys take the conventional license and operate the Islamic banking inside, they will not disturb you once you get the license. Whatever you operate will be on your own- and finally, we decided to go for the conventional license of a microfinance bank.”

The committee followed the advice, applied for the conventional licence, and obtained it quickly. As a result, Al-Hayat Relief foundation got its Islamic Microfinance Banks licenced in August 2013 and launched operationally in February 2014. The dearth of financial inclusion of the bank starts with its foundation of operating Islamic microfinancing with conventional licence. The potential to achieve the bank’s primary objectives is limited due to the contradiction of the license. All other themes of this study are interrelated to licencing issues, from misconceptions issues to limited Islamic financing products. BS1 informant also gave a recent update on the steps and efforts taken to change the licence to an Islamic licence:

“Although we start a bit rough and tough with conventional microfinance bank license. However, Alhamdulillah today, we have an Islamic non-interest microfinance bank for which we are struggling to have the Islamic certificate and should be licensed before the end of the year, Insha Allah...”

The statement from BS1, a high-rank bank staff, confirms that AMFB has not conceded nor given up on its ambition to Islamise its license after 7years of operation with a conventional license.

5.3 Misconceptions About Islamic Financial System

In Nigeria, there are several misconceptions among Muslims about Islamic Finance. Moreover, non-Muslims have faith-based biases and lack clarity about the Islamic banking system, which hinders their acceptance.

5.3.1 Islamic Finance is Only for Muslims

Islamic finance is a way to generate money through wealth creation and distribution. Non-Muslims are not prohibited from utilising Islamic Financial services or owning Islamic Financial institutions. While Islamic Finance is founded on the principles of Islamic law, its quality promotes social justice for all, making it appealing to Muslims and non-Muslims alike. SH2 stated:

“Another one is faith-based bias, whatever you call Islam some people will never go there, once they have a little trace back to an Islamic organisation some customer will never go there because they have islamophobia and it a problem today.”

In contrast, Citigroup, HSBC, Standard Chartered, and BNP Paribas are among the most notable financial organisations that provide Islamic financial services. This indicates that the ideals of Islamic Finance are not exclusive to Muslims. Moreover, in Nigeria, several existing conventional banks, such as Sterling Bank and Stanbic IBTC, have established an Islamic banking window, which attracts a growing number of non-Muslim investors attracted by the favourable returns offered by Islamic Finance services.

5.3.2 Islamic Financial Institutions (IFI) Are Charitable Organisations

SH1 expressed concern over several customers' misconceptions regarding AMFB as a charity organisation:

“Another point is the misconception about Islamic banking generally. Many people think that you are going there for a free fund when you go to an Islamic bank. They don't intend to repay, and these are the major problem we are facing internally.”

Islamic finance is based on wealth accumulation and profit-driven like other businesses. Islamic Financial Institutions are accountable to their shareholders and investors, who have invested money in the firm to obtain a satisfactory return, which the institution must provide in accordance with Shariah principles. As previously said, Islamic Finance is not a capitalist-driven financial system. In Islam, built-in mechanisms encourage Islamic Financial Institutions to engage in corporate social responsibility, such as the required Zakat, Waqf, and optional Sadaqah (donations), which may be used to aid in societal development.

5.3.3 Islamic Finance is an Islamisation Project

Several Islamic-oriented, good initiatives such as Sukuk, Islamic banks, and OIC membership have been seen as a mission to Islamise Nigeria by non-Muslims. However, Islamic finance comprises less than 1% of the world's financial system. Additionally, over 1.5 billion Muslims worldwide, making them much too diverse to share a unified objective. Muslims worldwide come from a variety of races and cultures. It is almost unlikely that such diversity could form a single administration with the common objective of world dominance. Islamic finance can be compared to halal foods, which have existed for centuries, are available globally, even in non-Muslim nations, and are enjoyed by Muslims and non-Muslims. Islamic Finance should not be seen differently since the availability of halal food has not resulted in the extinction of non-halal foods or the establishment of global domination.

5.4 Islamic Fintech

Fintech is a relatively new notion that refers to technology facilitating financial services, operations, business models, and customer engagement. In contrast, financial inclusion refers to ensuring the accessibility, availability, and use of formal financial services (Kovid et al. 2022). Inadequate Islamic financial technology continues to be a serious concern for all Islamic financial institutions operating in Nigeria. They are all propelled

forward by established fintech platforms to compete with conventional financial institutions in the market (Zakariyah et al. 2022). However, these platforms expose all IFIs Sharia non-compliance risk, excessive third-party charges and high maintenance costs.

AMFB staff and stakeholders highlighted fintech concerns, and the bank is now providing online services to consumers through a third-party platform named Bank One. This exposes them to an extra service charge and the possibility of engaging with a consumer via non-compliance. SH2 identified fintech as a significant AMFB challenge::

“Another challenge we are facing is applications software for banking services. In other Islamic countries that are making use of Islamic fintech, they have the capacity, unlike us, that we are using fintech which is not Islamic.”

Additionally, BS2 expressed concern about the compliance of the fintech they are currently utilising and multiple client complaints regarding the third-party traditional software application’s high charges:

“as I said earlier, the software we are using is not 100% compliant with what we are doing, so we receive calls from people accusing us of things that are not Islamic.”

Furthermore, BS3 explained AMFB’s inability to acquire an Islamic fintech platform for bank services:

“What I will be adding is the invalidity of affordable Islamic banking software, so when we are talking of the fintech, we are talking about money, and even commercial banks that are being licensed, they still have one or two issues concerning this software talk less of Islamic microfinance bank. we did not have that huge amount of money to develop software, so we just had to ride on a third party, and “bank one” was developed for the conventional banking system, but we have to manage and pave our way through.”

Nonetheless, AMFB is pursuing a full Islamic microfinance license, intending to adopt an Islamic fintech and phase out their present conventional fintech platform, Bank One. However, the worry continues to be the absence of an Islamic fintech company in Nigeria with which to partner.

5.5 Awareness

The dearth of Islamic Financial Literacy (IFL) remains a significant challenge to global Islamic finance industries, specifically in Africa, where most Muslims cannot differentiate the Islamic banking system from the conventional system. How Islamic banks work, the products, requirements, and all are still in infancy in Nigeria. According to this study, the lack of awareness in Nigeria’s IBF industry is two-level consumer and government awareness. Consumer awareness “is a process of knowledge, persuasion, decision, and confirmation before consumers are ready to use a product or service.” (M. Saad 2012).

This implies that clients must be aware of its existence, function, and purpose for them to accept and utilise a product efficiently and successfully.

All of the interviewees cited awareness difficulties as a formidable obstacle, making awareness a common theme. Therefore, BS1 made the following clarification:

“one of the challenges we are facing as an Islamic bank in Nigeria is the wrong perception; as you said earlier, there is no awareness to people by the government, and coming down to the Islamic organisations and community, it is a problem. Without the perception of IBF in Nigeria, there is no way we can grow, so perception is a big problem. So we all must unite and continue creating awareness; maybe the government can also have orientation and advocate awareness.”

Furthermore, SH2 said:

“I’m telling you that there are numbers of Muslims that are a customer of the microfinance bank (AMFB) that still could not differentiate between Islamic banking and conventional banking. So that is why we are saying there is a knowledge gap., many people cannot see the difference to the extent that some people have that hatred and bias to cover their judgment about how our bank works. So the knowledge gap is one of the reasons.”

BS3 did give some opinions on the duty and responsibility of AMFB to tackle the low level of awareness among non-Muslims and Muslims in Ijebu Ode about the Islamic banking system:

“It is our duty, not only to finance but also to educate people. We cannot progress until we have the means, capability, and ability to educate these people, and now we have more Christian patronising us than Muslims, but once we have the power and ability to educate people about what we are doing and this is the benefit, people will patronise us.”

Finally, BS2 detailed the efforts and initiatives done by AMFB to address the Awareness obstacles. First, AMBF explains to Islamic spiritual leaders, academics, and Imams how they might use various organisations and congregations to advance Islamic financial literacy:

“There are many steps. We had several excellent discussions with the imams in Ogun state. That we are well known for using their various mediums to promote us. Firstly, we are developing a perfect relationship with Ijebu Ode residence and Ogun state in general. Once the CBN issues our Islamic license, we should educate or reorientate the scholars about the Islamic banks.”

In its objective to expand the IBF market and encourage current traditional banks to adopt the IBF window at their branches, the Central Bank of Nigeria should also embark on the journey to employ more IBF experts and provide adequate training modules at the Islamic finance unit of the CBN, to train its staff and supervisors.

5.6 Limited IBF Training Institutions

Currently, Nigeria has only one university that offers Islamic banking and finance at the master’s and doctoral levels (none at the degree level): Bayero University Kano (BUK)

in the country's northern area. However, AMFB is located in the country's southern region, more than 900 kms south of Kano. Nigeria's developing Islamic banking industry desperately needs a new player and fresh graduate to fill the void of professionalism. Other universities in other parts of the country should provide degrees in Islamic finance. AMFB has had extensive collaboration with BUK via physical and virtual sessions despite the distance. According to SH1:

"We have an excellent relationship with the triple IBF (The International Institute of Islamic Banking and Finance, Bayero University, Kano). We have invited them twice to Ijebu Ode."

Although several Islamic finance institutes, such as the Institute of Islamic Finance Professionals in Lagos and the Certified Islamic Banking and Finance Institute in Ibadan, have been established in the country's southern region to train Islamic financial specialists and professionals. However, training with these schools will incur additional costs for AMBF, which they can avoid if they hire people with IBF experience. BS3 testify to this with the following statement:

"One other thing I will say is the unavailability of an Islamic institute nearby for a bank to have a well trained and professionals working in the bank if the bank actually have an institution very close by. But it is quite unfortunate that most of these institutions are actually in the north, so if you have to get the full required training, you have to go to the north or travel out of the country."

In conclusion, Nigerian universities offering finance, accounting, economics and Islamic studies should be urged to contribute their quota to the growth of Islamic banking and finance by offering Islamic finance-related courses and degrees to produce more IBF players and professionals in the industries.

6 Conclusion

Islamic microfinance is a new emerging discipline resulting from conventional microfinance theory and practice system constraints. These issues resulted from the demand of the Muslim countries and communities because Islam forbids taking and offering interest-bearing loans, *Garar* and *Maysir*. Alternatively, Islamic microfinance converged with conventional microfinance to eradicate poverty in Nigeria. Therefore, the current study investigated the challenges affecting Islamic microfinance banks, the bank's sustainability, and its relevant financial inclusion opportunities in Nigeria. In addition, the study proposes feasible solutions and modifications to Islamic microfinance's existing issues. The primary advantage of the Islamic microfinance model is that it satisfies both the economic and religious criteria of adhering to *Shari'ah's* financial guidelines. However, in Nigeria, financial inclusion projects of Islamic microfinance banks are hindered by the legal structure (i.e., Islamic operating licence), lack of knowledge, and misperceptions regarding Islamic financial institutions. Similarly, Islamic microfinance confronts operational challenges associated with Share capital, suitable Islamic financial technology for retail services, easy access for the unbanked, and human capital.

Regulators and policymakers must seek to adjust the Nigerian banking standards and regulatory framework to increase Nigeria's financial inclusion and accommodate the efficient functioning of Islamic microfinance banks. This research can assist regulators who may not be familiar with Islamic finance regulations and concepts. Nonetheless, Nigeria's Islamic banking industry will not be able to compete with the existing conventional banks unless the regulatory structure is amended to incorporate Islamic financing into the Nigerian landscape. Islamic financial institutions in Nigeria must prioritise Shari'ah compliance throughout all operations, including licensing, product, service, and technology. Although Nigeria's regulatory climate is inhospitable to IFIs, IFIs can learn from Malaysia how to adapt and grow Islamic finance in a conventional context. Additionally, IFIs in Nigeria should embrace innovative financial inclusion strategies such as micro Takaful, crowdfunding, and product integrations. Finally, IFIs should improve their recruitment practices and hire more Islamic finance specialists and graduates rather than relying on conventional staff training.

Lastly, the Muslim population in Nigeria is substantial, and their need for Islamic retail banking products to fulfil their religious commitments is essential. Therefore, the Nigerian government is primarily responsible for satisfying the needs of its people. Nigeria can emulate Malaysia, Turkey, the United Arab Emirates, and Indonesia, among others, which have effectively adopted Islamic banking and finance, innovative Islamic Fintech platforms, Islamic social finance, and Takaful as methods for addressing and eliminating financial exclusion in their respective nations.

7 Limitation and Recommendation

No customers were invited to the interview, nor were all AMFB stakeholders and employees. Consequently, some obstacles and concerns facing AMFB and its consumers may have been neglected. In addition, this study concentrated on one Islamic MFB in Nigeria's southern region. However, some have been established in the north, which is not covered by this study. Similarly, Al-Hayat microfinance bank continues to be owned by Al-Hayat Relief Foundation, an Islamic organisation based in Ijebu Ode. Therefore, this study excludes the connection and functional tie between the foundation and the bank. However, the majority of bank clients are foundation members. In addition, the scope of this study was limited to a few regulatory and supervisory issues and operational difficulties; public awareness and a few legal issues were mentioned but not thoroughly studied.

In addition, this study recommended some initiatives to the Nigerian financial regulators, policymakers, Islamic financial institutions in Nigeria, the Nigerian government, and the Muslim community. First, the Nigerian government is the first body that must take action to meet the demands of its population. In addition, the Nigerian government can learn from Malaysia, Turkey, the United Arab Emirates, and Indonesia, all of which have successfully implemented Islamic banking and finance, Islamic social finance, and Takaful as tools for addressing and reducing financial exclusion in their respective countries. Secondly, Islamic financial institutions in Nigeria must prioritise shariah compliance throughout all aspects of their operations, including licensing, product, service, and technology. Finally, regulators and policymakers must strive to amend

the Nigerian banking standards and regulatory framework to sustainably enhance the financial inclusion of Islamic microfinance institutions in Nigeria. Moreover, this investigation was limited to a single Islamic financial organisation. However, future academics will be able to do comparative evaluations of all existing Islamic financial institutions to determine their growth and achievements.

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Tone Management

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1 Introduction

The tone is a term meaning tampering with the tone and is used to describe the general ethical climate of companies legally. Managers and professionals describe the financial performance of their companies in front of stakeholders such as investors and auditors as determined by the board of directors, the audit committee, and senior management carry it out. Tone manipulation can be described as the terminology a manager uses to express the company's financial performance as the word "strong", an example of manager-specific optimism impacting investors' interpretation of disclosures made in conference calls (Davis, Ge, Matsumoto and Zhang 2015). The legal manipulation of tones strongly influences the decisions of investors in firms; hence, the tone is highly essential in the economic sector.

A. Tone accents

The tone is considered qualitative information, so it is important to study the subject of tone because of its important effects on companies. Several measurements are used to measure tone management example optimism and pessimism were assessed differently. Loughran and Macdonald's (2011) classification of positive vs negative terms, Net optimism is calculated as the difference in the frequency of positive and negative terms in earnings news releases.

About quantitative performance reports in corporations, the tone of the qualitative content, i.e. the tone of earnings news releases, may be unduly optimistic or gloomy.

Managers may seek to generate positive impressions to increase confidence in stakeholders by using management impression techniques to attract a wide range of stakeholders, including potential lenders and investors. It also suggests that managers of profitable firms disclose more information to boost their compensation (Abd-Elsalam, 1999). However, due to lower profits and budgets in companies, the manager may reveal less information regarding profits so as not to fail.

B. Positive and negative words in the tone

Table 1 shows some of the words that are classified as positive tone or negative tone.

The Positive statements that managers reveal are terms that reflect favorable outcomes in the company's financial performance and reports, and through which the management obtains the trust of investors and lenders, however, the negative statements of managers are the least that are disclosed, so that the manager, in this case, prefers not to be clear about disclosure because they are terms that reflect negative results in the

Table 1. Positive statements and Negative statements

Positive tone	Negative tone
Good	Loss
Gain	Bad
Best	Problem
Opportunities	Difficult
Despite	Claims
Able	Poor
Success	Against
Achieved	Mistake

company's financial performance and its reports, through which management can get a doubt, uncertainty and dissatisfaction with investors and lenders.

C. Tone studies

Many researches have been conducted on the topic of positive and negative tone; some of these studies:

A) Study Schleicher and Walker (2010)

The results of which indicated that tone is a response to a variety of managerial incentives. They find that losing companies, risky companies, and companies with analyst earnings forecasts are more optimistic, while companies with limited, recent earnings have a more pessimistic tone.

B) Study Huang, Teoh and Zhang (2014)

An unusually optimistic tone predicts future profitability; they also found that when institutions have high incentives to bias, an overly optimistic tone is more positive than investors have a "positive outlook". The unnaturally optimistic tone is often greater when companies earn earnings, match, or exceed analyst estimates. Their findings suggest that tone manipulation deceives investors and that this effect is in addition to that of receivables management. In addition, the excessive optimism in the quick response to the stock price raises an "extraordinary" enthusiastic tone. Finally, companies that engage in tone management are more likely to be older, younger, and have greater resources.

C) Study Davis et al. (2015)

Investigates the effect of a manager's optimism on the tone of group calls. They discover evidence that the principal's characteristics are essential and influence tone. They also found a role in determining the optimism or negative tone of conference call earnings. Understanding tone drivers in conference calls indicates that tone represents not only a

manager's confidential information about the company's future performance or strategic motivations. Rather, the manager's attitude toward optimism or pessimism is reflected in the tone used in conference calls. They also provided hints of several important factors (e.g., early professional experiences, charitable involvement) associated with a manager's tone. They also discovered that particular managers' tone patterns affect the overall tone of conference calls.

2 Conclusion

There is so far disagreement about tone in our time because it is based on the measure of tone. While most studies indicated that tone manipulation is due to achieving the interest of management, the tone may be not only about manipulation and can be a sign of the future and future facts that are correct, and this means that tone is not always revealed by manipulation that can provide information in the future.

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A Study on the Culture of Accountability in Non-profit Organizations in the State of Qatar

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Abstract. Despite the tremendous size of non-profit organizations in Qatar, there are a lack of studies that consider the application of accountability in these organizations. In this study, the concept of accountability in non-profit organizations in Qatar is studied and benchmarked with its counterparts in UK and Canada. Particularly, accountability is qualitatively evaluated and analyzed in three representatives non—profit organizations. The results suggest that some social cultural aspects may have negative impact on the applications of accountability in Qatar.

Keywords: Accountability · Transparency · Non-profit organizations · Qatar

1 Introduction

Non-Profit Organizations (NPO's) are widely growing worldwide and that arises serious concerns pertaining to the governance in these NPO's. These concerns are essential to establish “trust” in the validity and transparency of the operations of these NPO's. Here, the practice of the accountability plays major role in establishing the trustiness in these NPO's as shown in some studies [¹?²], which emphasize the importance of the accountability in the structure of NPO's. In Gulf countries (including Qatar), the culture and religion motivate serving the society in many ways at which NPO's play major social roles. Thus, studying the accountability in Qatari NPO's is significant, given the continuous increasing in the amount of their funding, the expansion of Qatari NPO's worldwide and the high impact of these NPO's on a variety of humanitarian areas.

Unfortunately, the accountability in Qatari NPO's is not considered in current literature. Generally, this lack of study includes the general aspects of accountability,

¹ Vangen, Siv, and Chris Huxham. Nurturing collaborative relations: Building trust in interorganizational collaboration. *The Journal of applied behavioral science*. 39(1), 5–31 (2003).

² Gibelman, Margaret, and Sheldon R. Gelman. A loss of credibility: Patterns of wrongdoing among nongovernmental organizations. *Voluntas: International Journal of Voluntary and Nonprofit Organizations* 15(4), 355–381 (2004).

including its concept and the application in the Qatari NPO's. Therefore, this study aims at studying the concept of accountability in Qatari NPO's. In particular, the cultural side of accountability is considered.

Here, a systematic qualitative study is conducted on three major Qatari NPO's. The staff of these NPO's were interviewed and the interviews focused on the cultural perception of the accountability among them. The analysis of these interviews reveals that there is a negative perception related to practice of accountability among all the interviewees. Particularly, and from the interviewees cultural point of view, the accountability (tentatively as a practice and regardless of its results) is directly connected to the lack integrity or lack of trust in the people being accountable. Hence, the practice of accountability might be avoided due to that negative perception.

The rest of this study is organized as follows. Section 2 presents the related literatures. The general concept of accountability is presented in Sect. 3. The methodology and study community are presented in Sect. 4, followed by the results of the interviews in Sect. 5 and their analysis in Sect. 6. This study is concluded in Sect. 7.

2 Previous Studies

In this section, relevant literature was surveyed and divided into two categories. The first category includes studies in accountability in first world countries, namely, the UK and Canada, for comparative purposes. The second category covers emerging countries like Malaysia, and GCC countries and Qatar.

2.1 Accountability in First World Countries

In British studies, accountability is seen as a way to reduce corruption in the non-profit sector, contributing to increased trust, efficiency and revenue. Peter Bird and Peter Morgan-Jones clarified the need to develop financial reports for charitable organizations which led to the development of the Statement of Recommended Practice (SORP). [3].

In crisis cases that require urgent humanitarian aid, the application of accountability is more complicated than the agreed-upon principles [4]. The HAP International project (established in 2003) plays a critical role in determining the concept of "accountability" and practicing humanitarian aid during conflicts and disasters in a responsible way.

In Canada's case, the credibility of charitable organizations has been the subject of public debate. Societal and organizational scrutiny led to the increased need for independent regulatory organizations in order to develop trust and accountability within the sector. [5]

³ Chew, C., & Osborne, S. P. Strategic positioning in UK charities that provide public services: Implications of a new integrating model. *Public Money and Management*, 28(5), 283–290 (2008).

⁴ Gross Stein, J. *Humanitarian Organizations: Accountable? Why, to Whom, for What, and How? In Humanitarianism in Question: Politics, Power, Ethics.* (2008).

⁵ Coyne, A. Take the politics out of charity? Far better to just cancel the tax break. *National Post*. <https://nationalpost.com/opinion/andrew?coyne?take?the?politics?out?of?charity?far?better?to?just?cancel?the?tax?break>. (2017).

Several studies were interested in viewing the contents of financial reports, such as the studies of Boyne and Laws [6], [7]. These studies conclude that accountability requires more information.

2.2 Accountability in Emerging Countries and GCC Countries

There are many studies which have investigated the issue of accountability and transparency in emerging countries such as Malaysia [8], [9]. Those studies suggested that the level of information provided by the organizations are not sufficient to the stockholders. While the culture of integrity needs to be promoted to enhance accountability in non-profit organizations in Malaysia. In Saudi Arabia, it is suggested that the commercial sector shows increased awareness about accountability, however, the practice of accountability is still limited [10].

As for Qatar, a study in profit sector considered the problem of the accountability found [11] that it focused on the suitability of the application of international standards on profitable organizations in order to achieve the accountability. The study suggested that the aforementioned standards can be applied to Qatari commercial companies in general.

To the best of our knowledge, no further studies related to the accountability in the non-profit sector in Qatar were found. Therefore, we try to fill that gap using the methodology mentioned in Section 4.

3 Related Theoretical Concepts

The concept of accountability evolved from a means to improve effectiveness and efficiency of public administration to be an essential component of organizational governance. Hence, the existence of a rational governance system cannot be conceived without accountability, which is close to the necessary trust to receive donations from a local society.

⁶ Boyne, G., & Law, J. Accountability, and local authority annual reports: The case of Welsh district councils. *Financial Accountability & Management*, 7(3), 179–194 (1991).

⁷ Blanco, Huguette, John Lennard, and Sylvain Lamontagne. “Annual reporting and accountability by municipalities in Canada: An empirical investigation.” *Accounting Perspectives* 10, no. 3 (2011): 195–224.

⁸ Roslan, Nurfarahin, Roshayani Arshad, and Nur Farahah Mohd Pauzi. Accountability and governance reporting by non-profit organization. In: *SHS Web of Conferences*, vol. 36, p. 00041. EDP Sciences, (2017).

⁹ Atan, Ruhaya, Md Mahmudul Alam, and Jamaliah Said. Practices of corporate integrity and accountability of non-profit organizations in Malaysia, *International Journal of Social Economics* (2017).

¹⁰ Alshehri, Amer Mohammed A. An investigation into the evolution of corporate governance and accountability in Saudi Arabia, PhD diss., King’s College London, (2012).

¹¹ Wadi, Roula Salman, and Ghassan H. Mardini. IFRS Suitability to Emerging Markets: Empirical Evidence from Qatar. In: *Qatar Foundation Annual Research Conference Proceedings*, p. SSHAPP2468. Hamad bin Khalifa University Press, HBKU Press, 2016.

The factors associated with accountability are varied and have been clarified in various definitions. In [12], the accountability was described as “the process of giving the actors the responsibility for their actions”. Four basic components of accountability have been identified, and those are: transparency, responsibility, compliance, and penalties [13].

The accountability theory can be reviewed from three aspects: the first is related to who has the right to implement accountability, i.e., to study the stakeholders ‘who?’. The second is about the content of accountability “what?”, while the third is related to the means to achieve the accountability ‘how?’.

We found that accountability is often associated with transparency and they are exchangeable complement to each other. Accountability has been studied in various areas, such as the legitimacy theory [14], stakeholder theory [15] and principal agent theory [16].

On the other hand, accountability intersects with cultural issues, as concluded by [17]. Two psychological emotions are assumed to be connected, namely, the feeling of guilt and the feeling of shame. Both of which affect accountability and information detection, which confirms the culture effect on accountability. This is referred to as “the cultural resistance to accountability”. The same resistance to the accountability due to cultural reasons is found in [18], which proposes methods to overcome that resistance.

4 Study Community

The problem of this study is associated with a negative social perception of accountability in Qatari society. Hence, there is no methodologically acquired data that can be objectively studied about accountability. In addition, the few available and reliable online digital data could not be used for a valid conclusion. Thus, we chose to compile data by interviewing individuals from various esteemed NPO’s in the country.

In particular, three non-profit Qatari organizations with a wide presence have been chosen. The three organizations have different funding methods and functions.

¹² Fox, Jonathan A., Jonathan A. Fox, and Lloyd David Brown, eds. *The struggle for accountability: The World Bank, NGOs, and grassroots movements*. MIT press, (1998).

¹³ Ebrahim, Alnoor. *The many faces of nonproof accountability*. *The Jossey-Bass handbook of nonprofit leadership and management* 102–123 (2016).

¹⁴ Gray, Rob, Reza Kouhy, and Simon Lavers. *Corporate social and environmental reporting: a review of the literature and a longitudinal study of UK disclosure*. *Accounting, Auditing & Accountability Journal* (1995).

¹⁵ Gray, Rob, Reza Kouhy, and Simon Lavers. *Corporate social and environmental reporting: a review of the literature and a longitudinal study of UK disclosure*. *Accounting, Auditing & Accountability Journal* (1995).

¹⁶ Laughlin, Richard. “A Model of Financial Accountability and the Church of England.” *Evans and Percy op cit*, 49–73 (2000).

¹⁷ Velayutham, Sivakumar, and M. H. B. Perera. *The influence of emotions and culture on accountability and governance*. *Corporate Governance: The international journal of business in society* (2004).

¹⁸ O’Hagan, Joshua, and David Persaud. *Creating a culture of accountability in health care*. *The health care manager* 28(2) 124–133 (2009).

The methodology of this study includes conducting of interviews with a targeted individuals who occupy high administrative positions and have the necessary background to answer the questions. All interviewed individuals were informed about the purposes of the interviews and their replies were recorded and analyzed.

Generally, the set of interview questions is divided into three general sections. The first section covers the awareness and knowledge of the concept of accountability.

In the second section, questions are about the effect of accountability on other aspects, such as the trust and revenue. The general pattern of the questions in this section is “what is the impact of accountability on...?”.

The third section assumes that accountability is a dependent variable on other related factors (such as the effect on stakeholders, interest mechanisms, factors that stimulate accountability, and the effect of transparency on accountability). Hence, the general pattern of questions is “What is the effect of on accountability.

5 Review and Analysis of the Interview Results

The analysis of the collected data is divided into seven aspects. These aspects are (1) the concept of accountability and the culture of society; (2) the relationship between accountability and trust in the organization; (3) the relationship between accountability and the revenues of the organization; (4) the stakeholders and those who have the right to hold accountability; (5) the factors that stimulate accountability; (6) accountability mechanisms, and; (7) the relationship between accountability and transparency.

5.1 The Concept of Accountability and the Culture of Society

The data collected from the interviews shows that accountability (as a value) is high in NPO's and, accountability is a stakeholders 'right'. Also, it found that there is a problem in society in realizing accountability and there is a culture of resistance in general.

The word “accountability” in Arabic has a negative connotation regarding public opinion. In particular, practicing accountability is negatively perceived and related to scrutiny, inspection, and censorship. All interviewees mentioned that the negative language used to refer to accountability as a reason to avoid applying it. Hence, self-accountability is supposed to be practiced (as motivated by the religion and values). This is compatible with study [19], which finds that accountability is to respond to the outside and interact with the inner self.

5.2 The Relationship between Accountability and Trust in the Organization

The interviews have shown that accountability is related to the trust/reputation of the NPOs. In particular, the interviewees have unanimously agreed that accountability enhances trust in non-profit organization and creates a positive relationship with the financiers and beneficiaries. Also, they mentioned that accountability is enhancing the rationalization of resources in the organization, and also, enhancing work procedures and policies.

¹⁹ Chisolm, Laura B. Accountability of nonprofit organizations and those who control them: The legal framework. *Nonprofit Management and Leadership* 6(2) 141–156 (1995).

5.3 The Relationship of Accountability and Revenues

The interviewees showed that the accountability is exchangeable related to the revenues of NPO's. This is because accountability increases the trust in NPO's and hence donators' satisfaction. They are more likely to continue donating. However, this is not an essential factor, as accountability is not widely practiced as previously mentioned.

On the other hand, the increase in organization's revenues often reflects the need for an increase in accountability mechanisms, as concluded from interviews.

5.4 The Stakeholders and Those Who Have the Right to Hold Accountability

The Interviewees agreed that accountability shall be practiced. However, they disagreed on who shall perform it. Some interviewees think that the all stakeholders have the right to practice the accountability. Some think that government or those who appointed by the government should monitor accountability (Higher stream accountability). Other interviewees think that the accountability is a responsible of the beneficial society (Lower stream accountability).

5.5 Factors that Stimulate Accountability

The interviewees think that some factors might motivates NPO's to practice the accountability. That includes the size, performance, and volume of the revenues, and the maturity of the organization. On other hand, any situation directly affects the reputation of the NPO might highly motivate practicing the accountability. The interviewees mentioned other factors that stimulates practicing the accountability in Qatar, such as the standardization of NPO's in accordance with international standards and need to preserve the credibility of NPO's. In which indicate the importance of the external factor for enhancing accountability.

5.6 Accountability Mechanisms

The interviewees consider auditing and financial reports as the most important way of monitoring accountability. Those reports are imposed by the Supervisory Authority in Qatar and is published on the Internet. However, the reports are not clear nor sufficient and do not reflect the true image of the organization as expressed by the interviewees. There is a necessity to develop these reports to reflect more transparent and understandable information by the stockholders.

5.7 Accountability and Transparency

The interviewees shed light on the current lack of transparency in existing organizations. They referred to the local Qatari culture which still does not consider accountability as a positive practice. On the other hand, NPO's in Qatar fear the misuse of their information if they get publicly published.

6 Conclusion

This study, to our knowledge, is the first that considers the culture of accountability in non-profit organizations in Qatar, which is investigated through a systematic interview, to obtain data from the local Qatari society. In particular, those who occupy executive positions in NPO's and have sufficient background were interviewed.

The results suggest that the concept of accountability in society is associated with negative connotations due to cultural and linguistic reasons. In addition, practicing accountability might affect the reputation and position of that whose work is being investigated for accountability purposes.

In future work, we would like to study the effect of the context and the characteristics of each individual domain or field, in which an NPO is active, on accountability in order to find any possible intercorrelation.

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Unlocking True Potential of Zakat

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Abstract. The capital assistance program (CAP), one of the distribution methods by zakat institutions to allocate zakat funds has been used to produce new entrepreneurs. Through CAP, these entrepreneurs will receive either seed fund or in kind to start their business. The ultimate aim of CAP is to improve asnaf's economic condition and quality of life. However, there is not much evidence that being highlighted to show the effectiveness of CAP. Does this program really help asnaf? Is it really works to bring out the recipients from poverty? Thus, this paper observes the recipients' opinions on CAP and how this program affects their life. To achieve this, questionnaires were distributed to 150 CAP recipients. Overall, results show that the recipients satisfied with program and agrees that CAP able to assist them in improving their quality of life. However, they believed that there is a room for improvements for CAP executions. The findings are important to provide some insights to the zakat institutions to revisit the existing program for further improvements.

Keywords: Zakat · Asnaf · Entrepreneurship · Capital Assistance Program

1 Introduction

Poverty is the main problem of world population. Studies on either determinant [1] or solution [2] regarding poverty has been extensively conducted. Poverty issue is not only faced by low-income or lower-middle income country, but also by upper-middle income and high-income country [3]. The definition of poverty also varies among countries and being revised accordingly depending on the recent situation in that specific country. There is a long list of solutions being identified by previous scholars which able to eradicate poverty. One that being labelled works in the long term is through entrepreneurship [4]. Although entrepreneurship is receiving growing attention, less effort has been devoted in the previous study to explore that entrepreneurship as a tool to resolved poverty issue.

Entrepreneurs are the catalyst for the growth and development of the country's economy. The economic achievement of a country depends on their entrepreneurs who are

always dynamic and moving forward [5]. Entrepreneurs not only develop the company and themselves, but they also bear the responsibility to develop society and the country. As a result of their actions, they are able to create new opportunities that can be explored by the general public. Businesses built on the foundation of helping and benefiting many people are capable of producing extraordinary achievements.

Noticing their potential in the economy, in Malaysia for instance, there are many assistances that being given to develop new entrepreneurs either in the form of seed money, in kind assistance or structured training. However, the main issue is about the survival of these entrepreneurs in the economy. What more worrying is, 580,000 businesses representing 49 percent of micro, small and medium enterprises (MSMEs) which is small businesses were reported ceased their businesses due to the outbreak of COVID-19 in 2020 (Department of Statistics Malaysia (DOSM), 2021). This is happened when they are not permitted to operate during Movement Control Order (MCO). Thus, there is a need to look into the form assistance that might assist these affected entrepreneurs to restart their business. Many of them fall under category of poverty.

By looking into this issue, this paper aims to observe recipients' opinions on the capital assistance program (CAP), which was provided by zakat institutions to the existing and new entrepreneurs and how it affects their lives. This paper is organized as follows; Sect. 2 presents the discussion on the past study on zakat and assistance. Section 3 describes the methodology used, and Sect. 4 discusses the results. Section 5 finally concludes.

2 Literature Review

Managing zakat fund is not an easy task. Accusation received by zakat institution on how they mismanage zakat can only be dismissed by detail record on the flow of money received and distributed. Public are concern on how zakat is being distributed, as this money being used to provide welfare of the poor and needy group and their needs is being taken care of [6]. One approach that can be considered is distributing zakat as a capital source or seed money. This has been proven works to improve the recipient's standard of living in Bangladesh [6]. Capital assistance is also known as interest free loan [7], which is provided to the eligible asnaf in order to increase recipients' income through entrepreneurship activities. It is merely different with microcredit which the borrower needs to pay both principal and interest. According to [8], microcredit acts as a social innovation to assist the targeted group, usually women to create financial freedom for better quality of life. Recipients use the money received to start their desired business.

The distribution of zakat, especially business capital assistance, needs to be evaluated for its effectiveness, especially in terms of its ability to produce asnaf entrepreneurs who can be independent and further may improve their socio-economic status. Assessing the effectiveness of a program which aimed at improving the socio-economic status of the target group is essential and should be done [9, 10, 11]. Evaluation of effectiveness is essential for assessing program performance [12] in identifying problems and weaknesses and improving program performance.

Various factors such as economics development and social perspectives should be considered in evaluating the effectiveness of a development program, especially for

the poor and needy. CAP indeed helps in improving recipients' life and secure them with better income for their living. According to [13], CAP does help and improve three elements in the recipient's life: economic condition, quality of life and the spiritual aspect of the recipients. This make them feel more confident to be in the community and they will feel more welcome. [14] stated that capital assistance is an interest-free assistance and non-financial services are provided to help the poor and needy in transforming their lives by embarking on business activities which help them to be out of poverty.

CAP is a relatively new zakat distribution program in Malaysia, where only few zakat institutions run this program. It is a bold move by zakat institutions to help asnaf improve their standard of living. However, according to [15], the failure of CAP implementation is due to the background of the recipient and the effort of zakat institution during the monitoring process. The recipient's weaknesses in talent, self-motivation, business idea generation and attitude are the leading causes of failure in sustaining the business [15, 16]. Adding to this, [15] and recently by [17] stated that the failure of CAP from the zakat institution is due to a lack of staff and expertise in monitoring the recipients in running the business and using the fund provided wisely. The recipients have to survive on their own without any additional support such as close monitoring and structured training organised by zakat institutions. It cannot be denied that entrepreneur attitude, recognition received, and desire to transform to better quality may lead to the survival of the business [18].

The weakness of monitoring CAP has been highlighted previously by [19]. In Malaysia, Amanah Ikhtiar Malaysia (AIM) and Yayasan TEKUN Nasional (TEKUN) were created to help entrepreneurs in terms of financial assistance. These two bodies offer a periodically and systematically monitored programs, which is different from CAP. Participants of AIM and TEKUN will undergo structured training and they have to pay back the money received. CAP seems lacking in the monitoring aspect. The other shocking reason is the thought that CAP is a charitable aid and the poor's right to receive it. Therefore, they do not feel obliged to pay the money back. Thus, determining the success or failure of such a program is not an important task. Blending all these factors will lead to the failure of the program, and in the end, the recipients will have low motivation, no commitment and end up with a business collapse. Thus, it is worth to look into the performance of CAP run by zakat institutions to overview the success and failure story for better improvements of the program.

3 Methodology

The data was collected through questionnaire distributions to 295 recipients under CAP in East Coast Region, Malaysia. The list of registered CAP recipients is provided by Majlis Agama Islam Dan Adat Istiadat Melayu Kelantan (MAIK), Majlis Agama Islam Dan Adat Melayu Terengganu (MAIDAM) and Majlis Uagama Islam Dan Adat Resam Melayu Pahang (MUIP). In Malaysia CAP recipients are entrepreneurs that own small scale of business. Some of them are selling food, decorative items, grocery items or any business which requires low capital to start with. They can be in the category of just starting or already own a business before receiving capital assistance. We are only able to obtain 150 feedbacks from the survey distributed. The surveys include fifty-three

questions asking the respondents the various information pertaining to the assistance received. One of the sections in the questionnaire is about the respondents' information on their business including the reason on why they start the business as well as how they market their products. In order to obtain the information on respondents' status whether they are still eligible for such assistance, they are also being asked on their financial ability and how structured they manage the business. The rest of the questions measured items are illustrated in the following framework. Performance of CAP was determined by the economic development and social development, as per visualised in Fig. 1. Economic development can be influenced by internal and external factors. For social development, it is determined by human capital, social network and community development. The question was designed to see the agreements of the statements on how CAP assist them to have a better quality of life with the use of 5 Likert scale from 1 to 5.

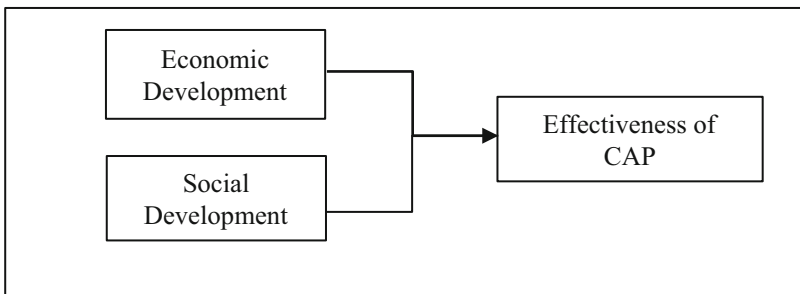


Fig. 1. Research framework

4 Results and Discussions

Table 1 shows demographic background of the respondents. Most of the recipients are below 45 years old, which is the normal age in the work force. 86% of the respondents received less or equal to RM2,500 amount of CAP. Nowadays, the amount is considered low if the cost of doing business is taken into consideration. It is even below the poverty line if it is converted into monthly income received by household in Malaysia. It must be understood that the recipients are receiving CAP as a one-off payment, not on the monthly basis. For the level of education, nearly 80% the recipients stop their education at secondary school. This data is quite interesting if we can further investigate the reason why they stop pursuing to the higher level of education. Is it because of the financial problem or they do not believe that by having a better education may be able to help them to improve their standard of living.

Next, participants need to provide information pertaining their business. We ask them whether they have officially registered their business. The authority is being informed of their official existence if they registered with the registrar of company or local authority. For Business evidence in Table 2, if the answer is Others, it means that they either not register at all or only verbally informed the head of village. For the Reason to establish

Table 1. Demographic background.

Item	Description	Frequency	%
Gender	Male	97	64.7
	Female	53	35.3
Age	25–30	25	16.7
	31–35	10	6.7
	36–40	43	28.7
	41–45	55	36.6
	45 and above	17	11.3
Marital status	Single	15	10.0
	Married	82	54.7
	Widow/Widower	34	22.7
	Divorced	19	12.6
Number of household	0–1	68	45.3
	2–3	45	30
	4–5	27	18
	6 and above	10	6.7
Education level	Primary school	71	47.3
	Secondary school	45	30
	Vocational School/Technic	19	12.7
	College/Maktab	12	8
	University	3	2
Amount of CAP received	Less than RM1000	40	26.7
	RM1001–RM2500	89	59.3
	RM2501–RM4500	14	9.3
	RM4501–RM6000	5	3.3
	More than RM6001	2	1.4

business, 57% of them are really aim to have their own business. Based on the result, the participants that do business seem to try their luck or no other choice to do for living, usually do not have a proper planning and run the business with low profit. They also do not own any unique product, which cause them to struggle and compete with others in the market. Among the good aspect that we can see is they have so much potential and the quality of the product cannot be denied.

Table 3 gives us the overview of the recipients' financial status as we want to see the direct impact of the recipients get after involved in CAP. The question such as their asnaf status as well as their financial management also being asked. 5% of them requested to be removed from asnaf category as they not only able to survive on their own but also able to hire workers to help them run the business. They also manage to expand, by running the business in more than one premises. Based on the information reported in Table 3, the recipients under CAP need to improve their financial management skills as 1/3 reported that no changes on their income after they received CAP and they do not

Table 2. Business information

Item	Description	Frequency	%
Business evidence	Registrar of company	80	53%
	Local authority	45	30%
	Others	25	17%
Reason to establish business	Trial and error	24	16%
	Passion	85	57%
	No choice	41	27%
Business level	Small	105	70%
	Medium	43	29%
	Big	2	1%
Quality product	High quality	136	91%
	Medium	14	9%
	Low	0	0%
Product competition	Many	82	55%
	Low	61	41%
	No	7	5%
Business potential	High potential	85	57%
	Able to sustain	65	43%
	No potential	0	0%
Ownership of premise	Own	60	40%
	Rent	35	23%
	Lease site	23	15%
	No premise	23	15%
	Government site	9	6%
Condition of premise (Cleanliness)	Clean	55	37%
	Average	68	45%
	Not satisfying	27	18%
Business performance	Outstanding	37	25%
	Stable growth	18	12%
	Static	94	63%
	Ceased operation	1	1%
Method of payment	Cash and on credit	25	17%

(continued)

Table 2. (continued)

Item	Description	Frequency	%
	Cash only	125	83%
Promotion strategy	Yes	64	43%
	No	86	57%

keep a proper financial record to track their income and expenses. When we compile the detail information about the sales, capital incurred and profit and loss generated, the range of sales is between RM80 and RM24,000, the capital range from RM100 to RM10,000 and the highest loss that they incurred are –RM5,000. The data need to be further scrutinized as most of the recipients do not have basic knowledge in financial management. They hardly keep the financial information as there is no requirements for them to report the financial performance of their business. Furthermore, no monitoring has been made after the money was distributed.

Table 3. Recipient financial status

Item	Description	Frequency	%
Status	Asnaf	143	95%
	No longer asnaf	7	5%
Financial record	Proper recording	41	27%
	No record	109	73%
Owner salary	Specifically, being allocated	40	27%
	No allocation	110	73%
Income after CAP receipts	No changes	100	67%
	Increase	50	33%
Hiring workers	Yes	43	29%
	No	107	71%

The next section of the question is to see their opinion from the economics perspectives, and the result is as shown in Table 4. The lowest mean of 2.77 was recorded, and this is to determine whether the recipients kept their money earned. Similar with the information provided in Table 3, we can generalize that something needs to be done to improve the financial management knowledge among these recipients. They also agree that their financial condition is much better before they started their business and the assistance provided by zakat institutions make them able to run a business comes true. The important thing is, they run a business in order to get a better opportunity to earn a higher income as compared to being employed. They also able to improve their standard of living and adding more new assets. Another significant finding from their answer is

the need of continuous training and monitoring to ensure that they are on track in their business.

Table 4. Economic perspectives

Question statements	Mean
I had the opportunity to run this business due to the program organized by the Pusat Zakat	4.72
My income level is now better than it was 10 years ago	4.50
My job level is now better than it was 10 years ago	4.50
The main factor that drives me to open my own business is to seize opportunities from economic progress	4.23
Business courses/training are the most important help to improve my standard of living	4.11
My assets are more than 5 years ago due to business assistance provided by the Pusat Zakat	3.92
My current income is sufficient	3.30
Before opening my own business, I had experience working elsewhere	3.03
I keep the monthly income earned	2.77

Financial ability may change the perspective on how people being perceived in the society. People with money normally received more respect from other people. There are situations where the poor people decide to isolate from the community as they have very low self-esteem due to their condition. Thus, we also ask the recipients about their association with the community, as shown in Table 5. In general, most recipients mostly agree that the way they communicate and mingle around is different with their status as an entrepreneur. As a business owner, it changes the way people looked at them and how they interact with people. They also feel welcomed by the society. They believed that they have the power to change themselves. In other words, they are the one that should be blamed for unable to change their life.

Table 6 is the overview of the Effectiveness of CAP. CAP was developed with the aim to provide a new method of zakat distribution. The idea is to ensure that the recipients able to transform themselves from the zakat recipients and later become the zakat payers. Does this really work? The next section of questions addresses this issue. Based on the question and their feedback, most of the respondents agree with the fact that CAP does help them to achieve better a living standard. They also noticed that their family received better treatment in the community, increase household income and manage to improve their education level. The most important thing is they believed that CAP is a powerful tool that being used by zakat institutions to eradicate poverty. They also have a better job opportunity after joining CAP as the recipients.

Table 5. Social perspectives

Question statements	Mean
The level of relationships in my community is very good	4.41
After getting help, I feel more confident to reach out to the community around me	4.20
I am confident that I can continue my life after this without getting help from the Pusat Zakat	4.05
I feel accepted as a member of the community now	4.01
I get involved in associations in my community	3.99
The area where I live have improved in the last ten years	3.94
Through the assistance received, participants can together increase their source of income independently	3.90
Since getting help, I have participated in activities held at my place of residence	3.89
Failure to change is due to me	3.74
Since receiving help, I feel my self -esteem has increased	3.67
This assistance program allows me to actively interact with the local community	3.65
Most community members in my place are generally trustworthy	3.31

Table 6. Effectiveness of capital assistance programme

Question statements	Mean
Useful as capital and to advance the business	4.97
The standard of living of the family improved	4.67
Me and my family's life situation is better than 10 years ago in terms of human capital	4.51
Me and my family's life situation is better than it was 10 years ago in terms of participation in community activities	4.23
Me and my family's life situation is better than it was 10 years ago in terms of material increase/asset ownership	4.23
Family income is more satisfactory	4.01
Pusat Zakat assistance succeeds in reducing poverty	3.78
Me and my family's life situation is better than it was 10 years ago in terms of jointly developing the community	3.77
My life situation and family are better than compared to the last 10 years in terms of job opportunities	3.63

5 Conclusion

The objective of this study is to see how the effectiveness of CAP, which was designed by zakat institutions that manage to transform recipient's quality of life. Based on the findings, we can see that most of the recipients satisfied with the execution of CAP. However, comparing the answer given by them, we can see somehow contradict respond were given. The recipients seem unsure on how to see whether CAP do change them. Although their answer stated that the income level increased after join CAP, it is questionable as they do not have proper financial records to show the evidence. Their answer is roughly based on the way they perceived their changed of lifestyle. Overall, with a proper monitoring process on the recipients' business performance after the money was distributed, CAP can be a powerful tool to change the asnaf life in the long term. Monthly money distribution is not healthy to the recipients as they become too dependent and not able to survive if there is no assistance provided to them. Currently, the findings only provide basic information on how the recipients opinion towards CAP. The recipients not being asked whether the assistance received is sufficient to help them with their business. Despite this limitation, in summary, CAP is an effective distribution method that should be implemented to ensure that zakat fund distribution is able to transform the recipient's quality of life and to dignify the economy of Muslims. It is recommended that the future research to look into the breadth and depth of CAP management from zakat officer point of view as they have deeper understanding on the program. Further, focus group discussion with selected CAP recipients also shall be conducted to look into detail their experience, benefits, sufficiency of fund provided and loopholes of the existing program for better improvements.

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Ways to Improve the Performance of Accountants in the Workplace

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1 Introduction

Performance is one of the most difficult aspects of employee management, so when we talk about the performance and productivity of any company, this means that we will talk about the performance of employees because it is the main factor for the success of any company. Therefore, it has become important to pay attention to improving the level of job performance because it is considered one of the ways to develop work. Both the company and the employees depend on each other to achieve their goals and objectives, thus, business owners often want some ideas to develop employees in order to improve their performance.

This paper is a short paper that aims to provide tips for improving the performance of accountants in the workplace from our point of view. The main purpose of this paper is to provide advice to business owners also leadership, to improve the performance of accountants in the workplace, and This paper contributes to spotlight on the importance of maintaining the performance of the accountant, as he/she has an effective role in the performance of the company.

Here are some ways that business owners can follow to improve the performance of employees in the workplace that leads to better efficiency and higher performance.

A. Finding out the Reason for Poor Performance

The reason for poor performance can be known by collecting data or by addressing the person directly. There may be external factors that affect the employee's performance, or the employee is not well trained or has not been sufficiently prepared. Therefore, it is important to understand what the problems are to be treated better instead of trying to cover them up or looking for some quick solutions, which is useless and unsuccessful to solve the problems.

One of the reasons for the poor performance of the accountant lies in the lack of the necessary documents and invoices that help the accountant in setting restrictions and knowing account balances. There may be another reason, which is the management's interference in the accountant's work.

B. Providing a Suitable Work Environment

The workplace environment has a significant impact on the level of motivation and performance of employees, as it affects the morale, productivity and participation of employees, whether positively or negatively (Chandrasekar, 2011).

Some business owners may consider this point a little expensive because it is considered from a financial point of view only if you are a business owner you have to think again; because it may be considered the basis in developing the performance of employees, so if you expect your employees to produce work at the global level, you must provide them with the appropriate environment in terms of providing comfortable, quiet spaces, bonuses, holidays programs and equipment. Workplaces that provide this environment, are classified as the best among other companies.

The programs used can be slow or full of errors. Also, the equipment may be old and unusable. Therefore, providing high-quality programs and equipment helps accountants to increase their performance in the workplace. Providing these programs and equipment is an essential thing for the accounting profession, as he/she spends most of their time using them since the accounting profession depends on entering and analyzing financial data.

C. Employee Training

Investing in employee skills enhances loyalty to the company and ensures the company's long-term success. Therefore, every company must have a plan to develop employees, whether through formal training or targeted training. Follow-up training and applying what has been learned will increase employee motivation and increase their production. Both personal skills and the training methodology play an important role in the employee's performance in their job, meaning that there is a positive relationship between training and work performance (Ibrahim, Boerhannoeddin, & Bakare, 2017).

Paid or unpaid training is a useful experience for the accountant. Training is an essential thing for the accountant. This helps him to develop his skills in accounting. Among these skills is the preparation of financial statements, and at the same time, training helps to learn accounting programs.

D. Avoid Discriminating Between Employees

When you distinguish between employees as types and categories, this divides the team and kills the spirit of teamwork, and this increases problems and problems instead of improving performance. Therefore, to ensure the coexistence of employees, care must be taken to treat employees on an equal basis, which allows for creating an environment that contributes to the development of each employee and raises the productivity of the work team.

Managers believe that comparing accountants and distinguishing them from each other may stimulate work and increase the accountant's production, but on the contrary, this generates illegal competition between accountants and also the absence of cooperation and thus this leads to the accountant being preoccupied with other matters and this results in poor performance of the accountant in the workplace.

E. Obtaining Professional Certifications

When you invest in your employees and provide learning opportunities, this, in turn, can lead to career development opportunities and thus will pave the way for the company's long-term success. Therefore, employees can be encouraged to attend some conferences related to the field of work or to present in some institutes to obtain professional certificates that may improve their thinking abilities and at the same time increase their performance in the workplace.

The accountant can be encouraged to obtain a master's degree, as it includes administrative courses that include topics related to auditing, finance and taxation. At the same time, it is important to get courses in accounting, management and auditing. All of these things increase the accountant's performance in the workplace and develop himself.

2 Conclusion

The employee is a valuable resource for the company, meaning that the success or failure of the company depends on the employee's performance (Hameed and Waheed 2011). That is why the company must recognize its employees are important to it and not only achieve profits because without these employees the company will not be able to achieve any of its goals. Also when the company has the best resource and tools, it will reach the best performance for employees.

This paper is presented to business owners and leadership. It can play a major role in company performance; due to the importance of employees. Therefore, what can be understood from this paper is that the employee's performance plays a major role in the success of the organization and that business owners should use or consider the previous viewpoint provided in this paper; in order to develop a high level of employee's performance success in the workplace.

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Factors that Influence Profit Sharing Investment Account Holders (PSIAHs) to Patronise Islamic Banks in Nigeria: An Empirical Study

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Abstract. Islamic banks (IBs) known as non-interest banks (NIBs) in Nigeria obtain majority of their deposits from profit-sharing investment accounts (PSIAs) (also known as mudarabah accounts). Jaiz bank was the first Islamic bank licensed in Nigeria and commenced operation in 2012, while Sterling bank was established as an Islamic banking window in 2013. At the initial years of their operations, the two banks attract over 60% of their deposits from PSIAs. However, in later years, a gradual but consistent decline in the contribution of PSIAs to the total deposits of the banks was observed. This is despite the share of profit that the banks paid their PSIAs which was higher than the average interest paid by conventional banks for savings account deposits of similar tenor during the period under review. Considering the importance of mudarabah account to Islamic banks, any decrease in its contribution to their total deposit is a source of concern, because it might indicate a gradual loss of confidence in the Islamic banks and a preference for a guaranteed deposit (that is likened to conventional banks' deposits). Therefore, the aim of this study is to examine the behavioural intention of PSIAHs to patronise IBs in Nigeria. With the objective of understanding the factors that caused the reduction of PSIAs in the total deposits of the banks for the period 2012–2020 using the Theory of Planned Behavior (TPB). TPB was especially chosen because of its flexibility and robustness in predicting the intention of people to perform a particular behaviour. Data was collected from 420 respondents and was analyzed using the Analysis of Moment Structures-Structural Equation Modelling (AMOS-SEM). 10 hypotheses were tested, and results obtained showed that 5 of the constructs including attitude, perceived behavioural control, religiosity, service quality, and deposit insurance have positive and significant influence on the intention of PSIAHs to patronise Islamic banks in Nigeria. The study makes theoretical and practical contributions and contributed to the literature on the study of deposit mobilization practices by Islamic banks which have been reported to be scarce. Findings of this study is important to Islamic banks in Nigeria because it revealed factors that are important in attracting and retaining their customers especially PSIAHs.

Keywords: Nigeria · PSIAHs · Mudarabah accounts · Islamic banks · Isah Ya'u

1 Introduction

The principal relationship that exists between banks (conventional) and their customers as mentioned in the celebrated case of *Foley v. Hill*, is that of a debtor and creditor (Campbell et al. 2009). When the customer deposits money with the bank, he impliedly lends the money to the bank (for safe keeping) with a promise by the bank to pay back the money whenever the customer demands repayment of such loan. The relationship is reversed when the customer's account is overdrawn, the bank becomes the creditor, and the customer the debtor. This relationship continues to subsist until the customer repaid back the loan (Pallavi 2015).

For Islamic banks (IBs) on the other hand, the relationship between them and their customers involves multiple contractual relationship, depending on the nature of the product and the contract between the parties (Mahinar et al. 2019). The relationship could take the form of depositor-custodian, debtor-creditor, investor-entrepreneur, agent-principal, vendor-purchaser, principal-agent, lessor-lessee, and between partners in a business venture (Chartered Institute of Management Accountants 2007). Mahinar et al. (2017) observed that for deposit account, the relationship between IBs and their depositors could be agent-principal (in a *wakalah* deposit), depositor-custodian (in a *wadiah* deposit), lender-borrower (in a *qard* deposit), investor-entrepreneur (in a *mudarabah* deposit) as well as between fellow partners in a joint investment project (a *musharakah* deposit) respectively.

This implies that Islamic bank customers may have different motives for patronising the banks depending on the contractual relationship that subsist between them and the banks. Studies abound on factors that influence the patronage of Islamic banks by their customers. However, review of existing literature revealed that the studies do not take into account these obvious differences in the contractual relationships that subsist between the banks and their clients. Results of such studies assumed the customers are the same and would be influenced by the same factors.

Profit Sharing Investment Accounts (PSIAs) which operate under the profit/loss sharing (PLS) scheme, where neither capital is guaranteed nor any pre-fixed return, is a one of the unique products offered by Islamic banks (Kaleem and Isa 2003). It was estimated that IBs mobilise over 60% of their deposits from PSIAs (Sundarajan 2007). In Nigeria, the first two Islamic banks (that is Jaiz bank and Sterling bank non-interest window established in 2011 and 2013 respectively) in their early years of operations (2013–2015), mobilised majority of their deposits from Profit Sharing Investment Account Holders (PSIAHs).

For Jaiz bank plc, the share of PSIAs as a percentage of total deposit dropped from 59.9%, 60.6% and 60% in 2013, 2014 and 2015, to 51.4%, 50.5%, 45.96, 45.27% in 2016, 2017, 2018 and 2019 before suddenly increasing to 57.5% 2020 respectively. For Sterling bank non-interest window on the other hand, the share of PSIAs fell from 53.4% and 58.9% in 2014 and 2015 to 51.7%, 48.8%, 23.3% in 2016, 2017, 2018, respectively before increasing to 55% in 2019 and subsequently decreasing to 25% in 2020 of the bank's total deposit. of Islamic finance of profit sharing and loss bearing that *mudarabah* deposits symbolize.

This is even though both Jaiz bank and Sterling NIB window had paid their PSIAHs a share of profit that is higher than the average interest paid by conventional banks on

savings accounts during the period under review. Jaiz bank paid its PSIAHs an average of 4.19% from 2012 to 2020. Sterling NIB window on the other hand disbursed an average of 16.59% to its PSIAHs as their share of profit for the period under review while the average prevailing savings account deposit interest rates for the same period under review was 3.43%.

This might not be a good for the budding Islamic banking industry in Nigeria, because *mudarabah* accounts are considered the flagship of Islamic banking and finance and the most desirable by Shariah than other types of deposits (Sobol 2019). A decline in the proportion of PSIAAs compared to other types of deposits could indicate loss of confidence in PSIAAs that are unique Islamic banking products and that are preference for other types of guaranteed deposits (*qard*), closely related to conventional deposits. This could defeat the rationale behind Islamic banking that encourages risk sharing against risk transfer.

If despite paying PSIAHs return on their investment that is higher than the average savings account interest rate for the period under review, IBs could still not attract PSIAAs in higher proportion than *qard* based deposits, this could indicate that PSIAHs in Nigeria patronise IBs for reasons other than profit motive. Could it be due to the fear of loss of their investment as confirmed by the study of Alaeddin et al. (2017) that PSIAHs stand the chance to lose part of or all their deposits if the return on their investment is negative? Or could it be due to other factors that the IBs are not aware of and need to probe further?

It is, therefore, the objective of this paper to determine the factors that influence PSIAHs to patronise Islamic banks in Nigeria with the aim of understanding the reason behind the decline in PSIAA deposits in the total deposits of Islamic banks in Nigeria. To achieve this objective, the paper is divided into 6 sections. Following the introduction is Sect. 2 which is on literature review, hypotheses development and brief history of Islamic banking in Nigeria. Section dwells on research methodology and data analysis, while Sect. 4 discusses findings of the study. Section 5 concludes the paper and makes recommendations.

2 Literature Review

2.1 Historical Background of Islamic Banking in Nigeria

The amendment of the banking law in Nigeria, (that is, Banks and Other Financial Institutions Act (BOFIA)¹) in 1991 paved the way for the introduction of Non-Interest (Islamic) banking by the Central Bank of Nigeria (CBN) (Central Bank of Nigeria, BOFIA 1991). This is because the BOFIA recognizes profit and loss sharing bank as a bank which transacts investment or commercial banking business and maintains profit and loss sharing accounts. It was based on this that Habib Nigeria Bank (HNB) obtained a license to operate a non-interest (Islamic) banking window in 1992 which only commenced operation in 1999. However, HNB's operations were terminated in 2005, because the parent bank-HNB transformed into Bank PHB after a merger with Platinum Bank and was

¹ A new BOFIA was issued in 2020 which categorically recognised non-interest (Islamic) bank as a specialised bank licensed by the CBN.

liquidated in 2011 (Standing Committee for Economic and Commercial Cooperation 2016).

In 2011, the CBN issued the Guidelines for the regulation and supervision of non-interest (Islamic) financial institutions in Nigeria guidelines for the Central Bank of Nigeria (Central Bank of Nigeria 2011). The guidelines spelt out the licensing requirement for the registration of Islamic banks in Nigeria as well the supervisory and prudential requirements for the effective supervision of the banks. Another key objective of the guidelines was to provide a level playing field between conventional banks and the new Islamic banks and to provide the public an alternative banking system that operates on profit and loss sharing principles that could engender healthy competition in the Nigerian banking space and to bring to the formal financial system, individuals and corporates that avoid the conventional banking system due to religious or cultural affiliations.

The release of the guidelines facilitated the licensing of Jaiz bank Plc as a full-fledged non-interest (Islamic) bank and Stanbic IBTC bank as a window of conventional bank (though it closed the window in 2018). In 2013 Sterling bank window was licensed also. Currently, there are three full-fledged non-interest (Islamic) banks, two windows of conventional banks and three full-fledged non-interest (Islamic) microfinance banks operating in Nigeria (Central Bank of Nigeria 2019). As at December 31, 2020, the total deposits of the non-interest banking sub sector stood at N 240.35 billion (approximately \$633 million) up from N28.628 billion as at December 31, 2014 (approximately \$93.57 million) (Central Bank of Nigeria 2020).

2.2 Theory of Planned Behaviour

This paper used the theory of planned behaviour (TPB) by Ajzen (1991) to examine the factors influencing the behavioural intention of PSIAHs to patronise IBs in Nigeria. TPB was an extension of the Theory of Reasoned Action (TRA) developed by Martin Fishbein (Vallerand et al. 1992). According to TRA, the intention (I) to perform a given action is a function of two factors, that is the person's attitude (ATT) towards performing the behaviour, (defined as one's overall positive or negative feeling about personally performing the behaviour), and/or the person's subjective norm (SN) in relation to his or her performance of the behaviour (i.e. the person's perception of how other people close to him think he or she should or should not perform the action).

Ajzen extended TRA in 1991 by introducing additional variable called "perceived behavioural control" (PBC) as an antecedent to behavioural intention and called it Theory of Planned Behaviour (Madden et al. 1992). Ajzen believes the inclusion of PBC was based on the idea that behavioural performance is determined jointly by motivation (intention) and ability (behavioural control) (Montano and Kasprzyk 2008). Ajzen opined that the more a person believes his performance of certain action would lead to positive outcome or would at least preclude negative consequences, the more the person is inclined to pursue and perform such action.

Although TPB traditionally uses three (3) variables of ATT, SN and PBC to predict the intention to perform a given behaviour, Ajzen (1991) opined that TPB is open to the inclusion of additional predictors if it can be established that the additional variables capture a significant proportion of the variance in intention or behaviour of interest after the theory's current variables have been taken into account. In the same vein, Mahmoud

and Abduh (2014) observed that Ajzen and Fishben (1980) allowed improvement on TRA by introducing some external variables such as demographic variables, attitude toward target, and personality traits in the model which could have an indirect effect on a person's attitude and thus upon behavioural intention.

Considering the unique features of PSIAHs (the respondents of the study) whom Lahrech et al. (2014) observed do not meet the basic characteristics of depositors, because neither their capital investment nor return on their investment is guaranteed by the bank. Grais and Pellegrini (2006) also described PSIAHs as principals who entrust their resources to an agent that is appointed by another principal. Therefore, this paper extended TPB by introducing seven (7) additional variables (that have been proven by previous studies to predict the intention of people to patronise IBs) as shown in the figure below with the aim of better understanding the intention of PSIAHs to patronise IBs in Nigeria. The additional variables include: knowledge and awareness proposed by Kaakeh et al. (2019) and Shome et al. (2018); service quality by proposed by Mahadin and Akroush (2018) and Al-Hunnayan and Al-Mutairi (2016), religiosity by Suhartanto et al. (2019a, b) and Baba et al. (2018); return paid to PSIAHs Kasri and Kassim (2009) and Arshad and Nurfadilah (2017); Deposit Insurance by Hamisu (2018) and Soledad et al. (2001); Transparency and disclosure by Lahrech et al. (2014) and Muhammad (2010); Reputation by Basheer (2018) and Gait and Worthington (2008) (Fig. 1).

2.3 Literature Review and Hypotheses Development

Ranjit (2011) defines a hypothesis as a conjectural statement of the relationship subsisting between two or more variables (dependent and independent variables). It involves set of propositions set forth as explanation for the occurrence of some phenomena to guide the investigation of some probable facts (Kothari 2004). The following hypotheses were tested based on the framework of the study.

Attitude Towards PSIAHs: Muhammad (2010) defines Attitude (ATT) as one's overall positive or negative feeling about personally performing a behaviour. Attitude towards a particular behaviour is largely dependent on the assessment made by individuals on whether or not the implementation of such a behaviour is favourable or otherwise (Fishbein 2008). It is a measure of the degree of a person's likes or dislikes of an object which is determined by the set of beliefs the person holds about performing the referenced behaviour (Wahyuni 2012). Several past studies have confirmed that attitude have positive and direct influence on the intention of people to perform a certain action. Such studies include Amin et al. (2011a, b) who confirmed that attitude influences peoples' intention to use Islamic personal financing in Malaysia. Also, Husin and Rahman (2016) in their study of the determinants of intention to adopt takaful in Malaysia confirmed that attitude plays a significant role on people's intention to adopt takaful in Malaysia. Similarly, Kaakeh et al. (2019) who investigated the effects of attitude, awareness and service, religious motivation, and pricing on the intention to patronise Islamic banks among Muslim minority in Spain, found that attitude is an important factor that affect the intention to use Islamic banking services among Muslim minorities in Spain. In the same vein, Zauro (2017) who studied the intention to accept Islamic finance products (IFPs) in Nigeria confirmed that attitude has positive and significant influence on intention to accept IFPs.

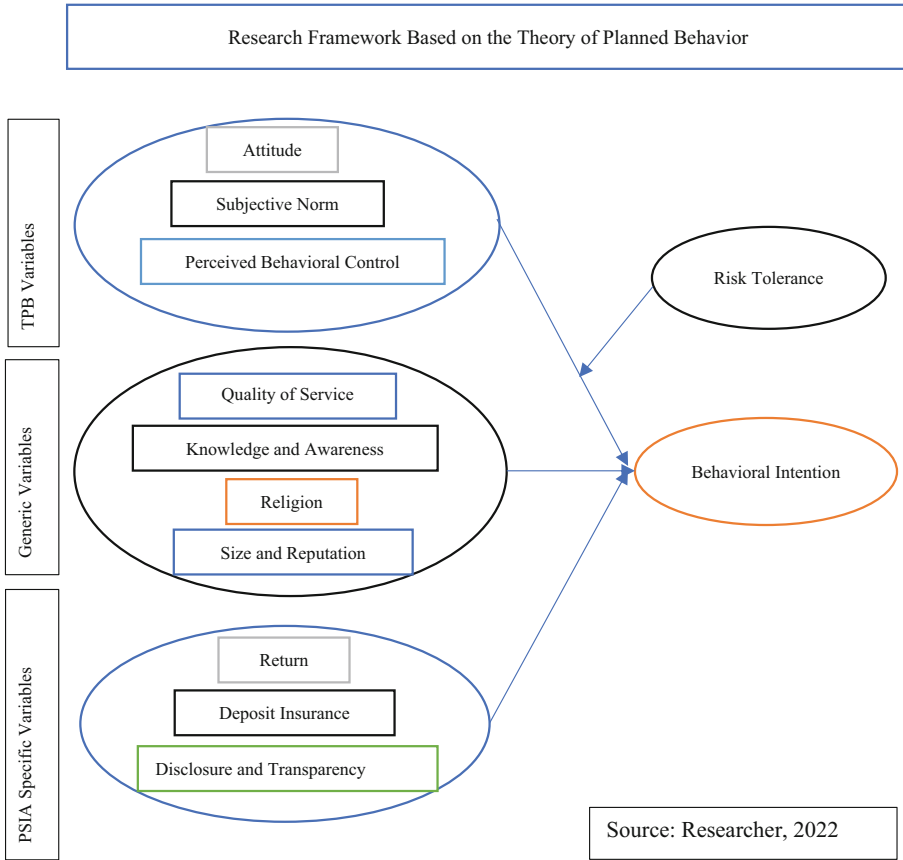


Fig. 1. Research framework

This paper therefore hypothesized thus:

H₁: Attitude (ATT) has significant and positive influence on the Intention of PSIAHs to patronise Islamic banks in Nigeria.

Subjective Norm: Montano and Kasprzyk (2008) defines Subjective Norm (SN) as a person’s belief that referents think he should (or should not) perform a certain behaviour, and his/her motivation to comply (MC) to that referent. It is a measure of the influence of one’s family, friends, relatives and other close associates on a person’s intention to perform a given task (Perugini 2004). Result of a number of past studies including Mahmoud and Abduh (2014) who studied the behaviour of Mauritians to patronise IBs confirmed that the intention of Mauritians to patronize Islamic banks was influenced by their SN. Also, findings by Bin et al. (2019) who studied factors that persuade individuals’ behavioral intention to opt for Islamic banking services in Malaysia, confirmed that SN is significant in persuading depositors’ behavioral intention to choose Islamic banking services. Other studies that established the significant influence of SN on intention include Taib et al. (2008); Al et al. (2014) to mention a few.

Therefore, this paper hypothesized as follows:

H2: SN has significant and positive influence on the intention of PSIAHs to patronise Islamic banks in Nigeria.

Perceived Behavioural Control (PBC): Kiriakidis (2017) defines Perceived Behavioural Control (PBC) as people's perception of the ease or difficulty of performing a given behaviour of interest. Madden et al. (1992) believes the more the resources and opportunities that individuals believe they have, the more their perceived behavioural control over the behaviour and the more inclined they are to perform such act. The theory of planned behaviour differs from the theory of reasoned action in its addition of perceived behavioural control.

Results of past empirical studies on the significance of PBC on the intention of Islamic bank customers patronage have shown mixed results. For example, the result of the study by Taib et al. (2008) and Husin and Rahman (2016) showed that PBC has significant influence on people's intention to patronise Islamic banks. However, findings by Alam et al. (2012) showed that PBC does not significantly influence the people's intention undertake Islamic home financing in Klang Valley, Malaysia.

Thus, this paper hypothesized that:

H3: PBC has significant and positive influence on the Intention of PSIAHs to patronise Islamic banks in Nigeria.

Religiosity: Religious obligation refers to the role played by religion in affecting one's choices, behaviours and activities (Amin et al. 2011a, b). Wiebe, and Fleck (1980) in their study on the on personality, correlates of intrinsic, extrinsic, and nonreligious orientations observed that religious obligation and religious consideration are the ultimate determinant that influence people's behavioural intentions to perform actions.

Findings by Amin, et al. (2011a, b) confirmed the significance of religiosity in determining customers' intention to use Islamic personal finance. Also, the result of the study by Sharma et al. (2016) who examined the effects of religiosity, generational cohorts and buying attitudes of Muslims in Bangladesh confirmed the significant influence of religion on the intention of Islamic bank customers. Other studies that confirmed the significance of religion in influencing customers' decision to patronise Islamic banks' products include: (Suhartanto et al. 2019a, b; Shome et al. 2018; Sayani and Miniaoui 2013).

Therefore, the current paper hypothesized as follows:

H4: Religiosity has significant and positive influence on the Intention of PSIAHs to patronise Islamic banks in Nigeria.

Knowledge and Awareness: It is believed that when people have sufficient knowledge about a given product or service, they become more aware about it and will be more willing to either support or oppose any action for or against such product or service (Mahmoud and Abduh 2014). Knowledge is defined as the skills and expertise acquired by a person or group of people through practical or theoretical understanding of a given subject (Abd Rahman et al. 2015). Awareness on the other hand is having or showing realization, perception or knowledge of a situation or fact. In Islamic finance, awareness

is consumers' knowledge about the existence of Islamic finance and how it differs with conventional finance (Jaffar and Musa 2014).

Several past studies have confirmed the influence of knowledge on the intention to patronise Islamic banks. These studies include Husin and Rahman (2016) in his study of the intention of Muslims in Malaysia to participate in Islamic insurance confirmed the significance of knowledge in influencing the intention participate in Islamic insurance. Also, the result of the study by Wahyuni et al. (2013) confirmed the significance of knowledge of a product or service on the usage of such product or service. Other studies that confirmed the influence of knowledge in influencing the patronage of Islamic banks by their customers include: Shome et al. (2018); Kaakeh et al. (2019); Mahmoud and Abduh (2014); Ezeh and Nkamnebe (2019); and (Fadhli Bassir et al. 2014).

Thus, this paper hypothesized that:

H₅: Knowledge and awareness has significant and positive influence on the Intention of PSIAHs to patronise Islamic banks in Nigeria.

Return Paid to PSIAHs: Return is that part of profit paid by an Islamic Financial Institution (IFI) as the fund manager (mudarib) to PSIAHs as funds providers (rabbul maal), which is an amount earned in excess of the capital invested, the percentage of which must be explicitly stated at the time of concluding the contract (AAOIFI, Accounting, Auditing and Governance Standards for Islamic Financial Institutions 2010). Since mudarabah as the underlying contract in PSIA offers neither capital protection nor fixed return, PSIAHs are expected to receive much higher returns as compared to other depositors whose deposits are guaranteed by the bank (Sadique, 2009).

Findings by Haron and Ahmad (2000), Hasan et al. (2012) and Metawa and Almosawi (1998) have shown that depositors in Islamic banks are motivated by the amount of returns they receive on their deposits, such that the higher the returns received (in the immediately preceding year) the higher the deposits mobilised and vice versa.

Therefore, this paper hypothesized as follows:

H₆: Return paid by Islamic banks has significant and positive influence on the Intention of PSIAHs to patronise Islamic banks in Nigeria.

Bank's Reputation: A Bank's reputation is the foundational element of a bank's ability to inspire and instill trust amongst its clients (Bassig, 2019). It connotes a bank's image and reputation as perceived by its customers (Irwani and Wajdi 2006). Rehman (2012) who studied customers' tendency towards the selection of Islamic banks in Pakistan confirmed that a Bank's reputation plays significant role in the selection of banks among customers of Islamic banks. Other studies that established the significance of banks' reputation in the patronage of Islamic banks include (Tara et al. 2014; Muhammad (2010).

However, the result of the study by Sayani and Miniaoui (2013) showed that bank's reputation does not have significant influence on the selection of Islamic banks among surveyed residents of the UAE.

Consequently, this paper hypothesized as follows:

H₇: Bank reputation has significant and positive influence on the Intention of PSIAHs to patronise Islamic banks in Nigeria.

Service Quality: Quality is defined as the totality of features and characteristics of a product or service that bears on its ability to satisfy customers' needs (Samuel 1999). Khafafa and Shafii (2013) observed that customers' satisfaction is important to the survival of any organization, and the quality of service delivered by an organisation is important in measuring customers' satisfaction level and customers' loyalty.

Result of the study by Al-hadrami et al. (2017a, b) who studied factors that affect the selection of Islamic banks among Bahrainis confirmed the significant influence of the quality of service as an important selection criterion. Also, result of the study by Al-Hunnayan and Al-Mutairi (2016) confirmed the significance of service quality in the selection of Islamic banks among Kuwaitis.

Therefore, this paper hypothesized as follows:

H₈: Quality of Service offered by Islamic banks has significant and positive influence on the Intention of PSIAHs to patronise Islamic banks in Nigeria.

Deposit Insurance on PSIA: Nigeria Deposit Insurance Corporation (2020) defines deposit insurance as a system established by governments to protect depositors against the loss of their deposits with banks and other financial institutions. Hamisu (2018) opined that the objective of deposit insurance system is to protect bank depositors who risk losing their life savings should the bank where they save their monies fail. Arshad (2011) defined Islamic deposit insurance as an arrangement to protect the insured depositors against the loss of their insured deposits placed with Islamic banking institutions in the event of the failure of an Islamic bank. Abubakar et al. (2016) observed that the role of both Islamic and conventional deposit insurance is the same because the deposit insurer seeks to protect the insured depositors in the event of the failure of their banks.

Result of the study by Soledad et al. (2001) on the interaction between market discipline and deposit insurance and the impact of banking crises on market discipline confirmed that the presence of deposit insurance gives depositors the comfort to keep their monies with the banks even during crises. Also, Hamisu (2018) confirmed that the introduction of deposit insurance in Nigeria that covers deposits of Islamic banks significantly improves the total deposit of Islamic banks.

Therefore, this paper study hypothesized that:

H₉: Deposit insurance paid on PSIA has significant and positive influence on the Intention of PSIAHs to patronise Islamic banks in Nigeria.

Transparency and Disclosure: Islamic Financial Services Board (2007) defines transparency as an arrangement where material and reliable information about an Islamic financial institution is made available on a timely and accessible manner to its customers and other stakeholders. Muhammad (2010) confirmed that PSIAHs usually refer to the disclosures contained in their banks' account statements as the basis for opening the account with the banks in the first place, and further require additional voluntary disclosures with respect to the basis of calculation and distribution of profit between the PSIAHs as rabbul maal and the Islamic bank as mudarib. Other studies that confirmed the significance of transparency and disclosure on the intention of PSIAHs to patronise Islamic banks include (Alaeddin et al. 2017; Alhammadi et al. 2018).

This paper hypothesized thus:

H₁₀: Transparency and disclosure by Islamic banks has significant and positive influence on the Intention of PSIAHs to patronise Islamic banks in Nigeria.

3 Research Method and Data Analysis

The current study adopted quantitative method towards determining the relationship between the intention of PSIAHs to patronise Islamic banks in Nigeria (the dependent variable) and the IVs. As observed by Umeh (2018) in a research on causes of social phenomenon, quantitative research method is most suitable in eliciting responses from respondents. The study collected data from 450 respondents and utilised structural equation modelling (SEM) to analyse the data. SEM was described by Walliman (2011) as statistical technique that makes it possible to examine a set of relationships between one or more dependent variable (s) and one or more independent variables and allows questions that involve multiple regression to be answered.

3.1 Sampling Technique

The convenience sampling technique was utilised to collect data from the PSIAHs of Jaiz bank plc and Sterling bank NIB window from the three states of Lagos, Kano, and the Federal Capital Territory (FCT), Abuja. The convenience sampling technique was adopted (despite the claim against it that could be limited in representing the entire population) because of the provision of the Central Bank of Nigeria (2016) consumer protection framework that requires banks to treat their customers' information in strict confidence and not to divulge it to third parties. Given the unique characteristics of the target respondents (PSIAHs of the above two banks), the questionnaires were distributed through the branch managers of the two banks in the above states who in turn distributed them to their PSIAHs.

Although convenience technique is not the most desirable method of data collection, however, Bassir et al. (2014) opined that it is the best viable alternative for getting feedback on trends among bank clients. Also, several past studies including (Haque et al. 2009; Irwani and Wajdi 2006); Amin and Isa 2008) that studied the behavioural pattern of Islamic bank customers in different jurisdictions have confirmed the robustness of the convenience technique as a sampling method towards eliciting unbiased responses from bank customers.

3.2 Respondents and Study Area

The respondents in the current study consisted of PSIAHs of Jaiz bank plc and Sterling bank NIB window from the states of Lagos, Kano, and the Federal Capital Territory (FCT), Abuja. Abuja was chosen because of its cosmopolitan nature, which according to the World Population Review, (2020) attracts people from all parts of Nigeria, and includes all the various ethnic groups, tribes and religious affiliation found throughout Nigeria. Also, Jaiz bank has its headquarters in Abuja while Sterling bank NIB window has several branches there. Kano and Lagos States on the other hand were chosen because

according to the National Bureau of Statistics (2017) they are the most populous states in Nigeria with a population of 13,076,892 people (thirteen million, seventy six thousand, eight hundred and ninety two) and 12,550,598 (twelve million, five hundred and fifty thousand, five hundred and ninety eight) people respectively. The two states are adjudged the business hubs of Nigeria that attract people from all around the country thereby making residents of the respective states a good representative of Nigerian population. Also, the two banks have several branches in the states.

Selection of the target population in the current study was restricted to Jaiz bank and Sterling bank NIB window because they were the only ones that have been in operation for good number of years (Jaiz from 2012 to date and Sterling NIB Window from 2013 to date) and from whom it would be much easier to obtain data from their PSIAHs. The other three Islamic banks; SunTrust bank NIB window, Taj bank and Lotus bank only commenced operations in August 2019, December 2019 and May 2021 respectively, and could not have good PSIAHs. As such the banks do not have PSIAHs that have transacted with them for a long time to be able to share their experiences reasonably, while the remaining three Islamic banks (Tijarah, I-Care and Halal Credit) are microfinance banks who have only micro-savers that don't fit into the definition of PSIAHs that the current study intends to understudy.

3.3 Survey Instrument

Questionnaire was deployed in obtaining information from the respondents of the study. The questionnaire was developed in English and respondents were requested to indicate their responses using a five-point Likert scale, with 1 being (strongly disagree) and 5 (strongly agree). The choice of the 5-point scale over other was informed by the evidence in the literature that 5 and 7 points scales were more valid and reliable than shorter or longer scales (Krosnick 1991). Its adoption was equally to make the questionnaire shorter and less complex to elicit the desired responses. Questions contained in the questionnaire were adopted from previous studies with slight contextual modifications to suit the objectives of the study. The studies from which the instruments were adopted established the validity and reliability of the instruments. The instrument contained 66 items that measured 11 constructs as shown in Table 1 below.

To ensure high response rate and in line with the recommendation of Sekaran and Bougie (2016) emails, phone calls and short messages (SMS) were sent as reminders to the branch managers so that they follow up on the respondents.

3.4 Data Analysis

The Analysis of Moment Structures-Structural Equation Model (AMOS-SEM) path modelling software was used in analysing the data collected in the current study. Bentler (2013) described SEM as a collection of statistical methods that allow the analysis of the relationship between one or more independent variables (IVs) and one or more dependent variables (DVs) to be measured and tested in a study. Suhr (2006) expatiated further that SEM is a hypothesized pattern of directional and nondirectional relationships among a set of measured and latent variables. Data cleaning (to eliminate missing data) and the identification of outliers (both multivariate and univariate) were conducted to reaffirm the

Table 1. Summary of Constructs and Items

Construct	Type	Source	No of Items
Intention	IV	Obeid and Kaabachi (2016); Zauro (2017); Gangwal and Bansal (2016) and Aziz and Afaq (2018)	5
Attitude	DV	Amin et al. (2011a, b) and Kaakeh et al. (2018)	5
Subjective Norm	DV	Zauro (2017), Al-hadrami et al. (2017a, b) and Taib et al. (2008)	5
Perceived Behavioural Control	DV	Al-majali and Mat (2018) and Al-Debei et al. (2013)	5
Religiosity	DV	Amin et al. (2011a, b), Bananuka et al. (2019) and Sharma et al. (2017)	5
Return Paid to PSIAHs	DV	Muhammad (2010)	8
Knowledge and Awareness	DV	Kaakeh et al. (2018) and Jaffar and Musa (2014)	6
Reputation	DV	Rehman (2012), Naser et al. (2013) and Muhammad (2010)	8
Service Quality	DV	Othman and Owen (2011); Alnaser et al. (2018); Amin and Isa (2008); Lomendra et al. (2019) & Mahadin and Akroush (2018)	6
Deposit Insurance	DV	Hamisu (2018) and Muhammad (2010)	6
Transparency and Disclosure	DV	Lahrech et al. (2014a) and Muhammad (2010)	7

integrity of the data. Thereafter, several significant statistical tests including normality, linearity and multicollinearity tests were conducted. After the data satisfied the above statistical tests, the exploratory and confirmatory factor analysis were conducted. The reliability and the validity of the items were also determined. Thereafter, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were conducted.

EFA helps to reduce variable set and to determine major dimensions of interest and proof of the potential indicators of factors in the study (Bentler 2013). EFA provides a tool for consolidating and grouping together correlated variables and for generating hypotheses about underlying processes (Tabachnick and Fidell 2013). Wipulanusat et al. (2019) opined that EFA assists the researcher to determine the number of factors to retain and those to delete from the model of the study. CFA on the other hand is used to confirm interdependence between observed variables, particularly where the researcher is interested in finding out the major issue that creates the commonality among variables of a given study (Kothari 2004). Hair et al. (2018) observed that CFA is a way of measuring how well variables and factors in a research fit the model of the study as

measured by the collected data collected. The CFA was performed in the following four steps: factor loadings, model goodness of fit, reliability test, as well as convergent and discriminant validity tests and the required thresholds were met.

4 Findings and Discussions

4.1 Exploratory Factor Analysis

In the current study, sixty six (66) observed variables were used to conduct the EFA in order to determine the pattern of the TPB based on the perception of the PSIAHs in the respective study areas. The following tests: multicollinearity, sampling adequacy and the proportion of variance explained Kaiser meyer olkin (KMO) and the Bartlett's test of sphericity were conducted to ensure that the data meets the minimum requirements necessary for factor analysis. During the process, seventeen (17) items were deleted because they had loading values < 0.4 , leaving forty-nine (49) items under ten (10) latent constructs, extracted for further analysis as shown in Table 2 below:

Table 2. Factors extracted

S/N	Factor	Items extracted
1	Attitude	5
2	Subjective norm	5
3	Perceived behavioural control	4
4	Knowledge & awareness	5
5	Religion	5
6	Service iuality	8
7	Return	4
8	Deposit insurance	4
9	Reputation	3
10	Transparency & disclosure	6
	Total	49

Appendix 1 contains details of the items extracted and number of items loaded under each of the 10 constructs.

Table 3 shows the requirement for EFA tests, and the results obtained in the current study, which confirmed that the variables met all the statistical requirements:

4.2 Confirmatory Factor Analysis

CFA was deployed for scale validation using SEM. AMOS was used to perform SEM to estimate the model of the study using the 10 factors extracted from the EFA. The model

Table 3. Summary of the results of EFA statistical requirement tests

S/N	Items	Requirement	Results obtained
1	Determinants	>0.00001	0.00005397
2	KMO,	> .60	0.952
3	Bartlett's Test of Sphericity	Significant @ .05	Significant @ .000
4	Anti-image	Diagonal values > .50	All diagonal values > .50
5	Communalities matrix	> .60, but > .50 is acceptable	All values > .50
6	Proportion of Variance Explained (PVE)	>60%	Cumulative % = 70.058%
7	Rotated Matrix Explained	> .30	All values were > .30

was identified with a Normed Chi-square (CMINDF) of 2.260, and was significant at 1% with a P-value of 0.000, which satisfies the recommendation of Lomax (2012) and Tabachnick and Fidell (2013). In the same vein, a Comparative Fit Index (CFI) of 0.903 and Root Mean Square Error Approximation (RMSEA) of 0.062 were obtained which satisfied the recommendations of Awang and Bangi (2015) and Bryne (2010) who opined that the closer the value of CFI is to 1 the better the model fit, and an RMSEA value of 0.08 represent reasonable and acceptable fit. This shows the fitness of the model and the adequacy of the sample size of the study (Fig. 2). Table 4 below summarised the results obtained vis-à-vis the recommended criteria and confirmed the model fitness.

Table 4. Summary of model goodness fit

S/N	Items	Requirement	Results obtained
1	Normed Chi-square (CMINDF)	<5	2.260
2	P-value	<0.05	0.000
3	CFI	> .90	0.903
4	RMSEA	< .08	0.062

Also computed in the study was the Coefficient of Determination (R^2) which according to Sekaran and Bougie (2016) measures the percentage of variance in the DV of a study that is predicted by the variation in the IVs. An R^2 value of 0.645 was obtained which according to Monecke (2012) confirms the predictability of the model.

4.3 Reliability Assumption

According to Awang and Bangi (2015) reliability assumption is concerned with the ability and reliability of the model to measure the latent constructs of the study. An

instrument is reliable if it gives the same result when tests were repeated with the same instrument under constant condition (Ranjit 2011). For the current study, Cronbach's Alpha > 0.70 as contained in a Appendix 2 were obtained for all the variables, which confirmed the reliability of the measures of the study.

4.4 Validity Assumption

Awang and Bangi (2015) defined validity as the ability of an instrument to measure what it is supposed to measure and nothing else. Two types of validity namely convergent and discriminant validity are expected to be achieved in an instrument and the recommended threshold by of 0.5 (for convergent validity) and 0.85 (discriminant validity) by Awang and Bangi (2015) and Hair et al. (2018) were achieved as shown in Table 4 below (Table 5):

4.5 Results and Discussions

Attitude and Behavioural Intention of PSIAHs to Patronise Islamic Banks

H1 predicted that attitude has significant and positive influence the intention of PSIAHs to patronize Islamic banks in Nigeria. Result obtained as presented in Table 6 below showed that attitude had significant and positive influence on the intention of the respondents at 1% ($\beta = 0.620$; S. E = 0.105; CR = 5.910; $p = 0.06$). This is consistent with the results obtained by several past studies including Bin et al. (2019) who confirmed that attitude has significant influence on the intention of the respondents in his study in selecting which Islamic bank to patronise. Also, Amin (2017) who used TRA to study the effects of attitude; social influence; religious obligation; government support; and pricing, on the intention to use Islamic personal financing in Malaysia confirmed that attitude has significant influence on the intention of the respondents to use Islamic personal financing. Other empirical studies whose findings are also consistent with the result obtained in this study include: Zauro (2017); Jaffar and Musa (2014); Mahmoud and Abduh (2014).

This indicate that PSIAHs believe that patronising Islamic banks will positively impact their lives and showed the significance of attitude in influencing the intention of Islamic bank customers and particularly PSIAHs towards patronising Islamic banks. Therefore, it is imperative for the Islamic banks in Nigeria to intensify public enlightenment to its customers on the advantages of mudarabah accounts as savings and investment platforms in order to sustain the positive attitude shown by PSIAHs in patronising IBs in Nigeria.

Subjective Norm and the Intention of PSIAHs to Patronise Islamic Banks

H2 hypothesized that SN has significant and positive influence on the intention of PSIAHs to patronize Islamic banks in Nigeria. However, results obtained ($\beta = 0.002$; S. E = 0.030; CR = 0.071; $p = 0.943$) do not support the hypothesis. This is consistent with the findings by Zauro (2017) who investigated the determinants of the intention to accept Islamic financial products (IFPs) in Nigeria and concluded that there is no significant and direct relationship between SN and the intention to accept IFPs in Nigeria. Other

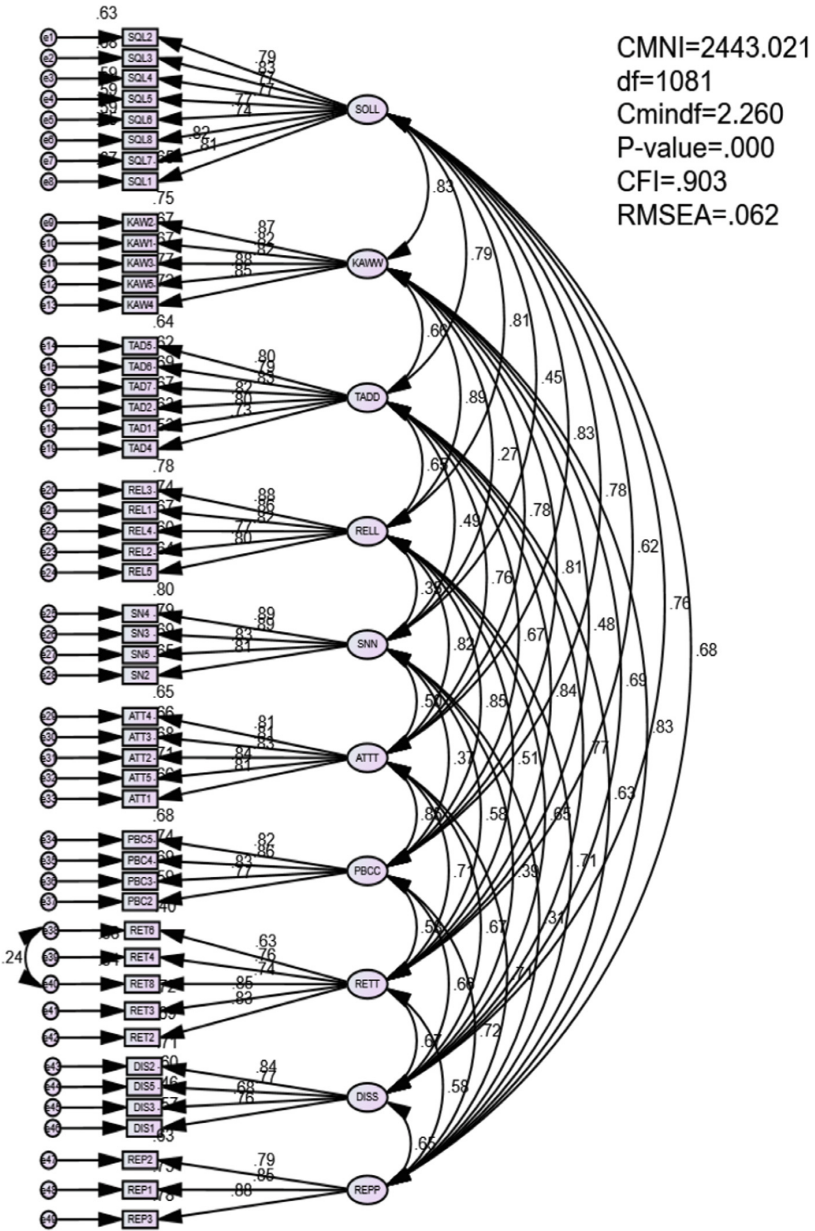


Fig. 2. Measurement model

studies that confirmed the insignificant influence of SN on people’s intention to patronise Islamic banks include (Husin and Rahman 2016; Ali et al. 2015). Also, findings by Husin and Rahman 2016 who studied Muslim’s intention to participate in family takaful in Malaysia revealed that SN does not influence Malaysian Muslims’ intention

Table 5. Convergent and discriminant validity

	CR	AVE	MSV	MaxR(H)	DIS	SQL	KAW	TAD	REL	SN	AT	PBC	RET	REP
DIS	0.858	0.603	0.554	0.866	0.777									
SQL	0.932	0.630	0.496	0.933	0.704	0.794								
KAW	0.928	0.720	0.601	0.930	0.511	0.676	0.849							
TAD	0.904	0.612	0.585	0.909	0.744	0.681	0.541	0.783						
REL	0.927	0.719	0.540	0.933	0.516	0.677	0.718	0.492	0.848					
SN	0.905	0.704	0.319	0.908	0.347	0.402	0.230	0.461	0.330	0.839				
AT	0.918	0.691	0.569	0.919	0.551	0.701	0.652	0.615	0.735	0.455	0.831			
PBC	0.891	0.672	0.569	0.896	0.490	0.627	0.739	0.559	0.704	0.336	0.754	0.820		
RET	0.859	0.553	0.585	0.877	0.627	0.563	0.377	0.765	0.502	0.565	0.656	0.516	0.744	
REP	0.878	0.706	0.601	0.880	0.537	0.609	0.775	0.541	0.569	0.284	0.601	0.668	0.502	0.840

to participate in family takaful. In the same vein, results obtained by Ali et al. (2015) who studied factors that influence investors' behaviour in Islamic unit trust in Malaysia, found that friends and family have no effect on the intention of respondents to patronise unit trusts. However, the result obtained in the current study contradicted findings by (Forward 1997; Bin et al. 2019).

One thing that could explain the reason for the lack of significant influence of SN on the intention of PSIAHs to patronise IBs could be attributed to the few number of Nigerians currently using Islamic financial products and services (IFPS) whom Enhancing Financial Innovation and Access (2015) in its survey on Access to Financial Services in Nigeria reported to be less than 1% of the Nigerians and that only about 7.5% are familiar with IFPs. This implies that family and friends of PSIAHs may not be knowledgeable enough about the products and services offered by the IBs to influence their intention to accept the products. This still underpins the importance of increased awareness about the benefits of IFPs to Nigerians.

Perceived Behavioral Control and the Intention of PSIAHs to Patronise Islamic Banks

H3 predicted that PBC has significant and positive influence on the intention of PSIAHs to patronise Islamic banks in Nigeria. Result obtained ($\beta = 0.159$; S. E = 0.089; CR = 1.779; $p = 0.075$) confirmed that the hypothesis was supported at 5% significance level, thus confirming a positive and significant relationship between PBC and the intention of PSIAHs to patronise Islamic banks in Nigeria. This is consistent with results obtained by (Taib et al. 2008; Bin et al. 2019) who confirmed the significance of PBC on the intention to patronise Islamic banks.

The finding of the current study, which is in line with that of several previous studies, have confirmed that PSIAHs have positive attitude toward Islamic banks based on the resources and opportunities available to them. The result has also buttressed the position of Ajzen (2011) who emphasized that resources available to a person, the person's past experiences of performing a particular task and his future expectation of performing similar task to some extent dictate the possibility of achieving a particular behaviour.

The positive disposition shown by the respondents towards IBs, measured by their PBC is a good indication that they believe they have the resources to patronise the banks. Also, their future expectation of using the same product is positive. Islamic banks in Nigeria are thus encouraged to ensure the positive disposition exhibited by the respondents is sustained into the future by increased public awareness and improved quality service delivery.

Religiosity and the Intention of PSIAHs to Patronise Islamic Banks

H4 predicted that religiosity has positive and significant influence on the intention of PSIAHs to patronise Islamic banks in Nigeria. The result obtained ($\beta = 0.396$; S. E = 0.103; CR = 3.844; $p = 0.000$) showed that the hypothesis was supported at 1% significance level. The finding of this study corroborated some of past studies including Amin et al. (2011a, b) who confirmed the significance of religiosity in determining customers' intention to use Islamic personal finance. Other studies that confirmed the significance of religion on the intention to patronise Islamic banks include (Suhartanto et al. 2019a, b; Shome et al. 2018).

The finding of this study shows the importance of religion in influencing the intention of PSIAHs to patronise Islamic banks in Nigeria which could be based on their desire to serve Allah in their worldly activities and to avoid transactions involving interest, gambling, alcohol, speculations, and other non-permissible activities that Islamic banks avoid. The result is consistent with the findings by Maiyaki (2011) who under studied factors influencing bank's selection in the State of Kano Nigeria, and found that the banks' branches and loan charges were not among the determinants of bank selection. Maiyaki attributed the insignificance influence of loan charges in the selection of banks among Kano State residents based on religious grounds, because majority of Kano residents were Muslims, and do not care much about the loans offered by conventional banks irrespective of the amount of interest charged on the loans. The findings in the current study is also consistent with the findings by Zauru (2017) who confirmed positive relationship between religious obligation and intention to accept IFPs in Nigeria. The implication of the findings is that religion play a key role on the intention of PSIAHs to patronise IBs in Nigeria. Therefore, IBs and other stakeholders should strive to put in place robust governance structure that would ensure the banks comply with Shari'ah principles in their entire operations.

Knowledge and Awareness and the Intention of PSIAHs to Patronise Islamic Banks

H5 hypothesized that knowledge and awareness has positive and significant influence on the intention of PSIAHs to patronise Islamic banks in Nigeria. However, results obtained ($\beta = -0.99$; S. E = 0.152; CR = -0.652 ; $p = 0.514$) did not support the hypothesis, because negative and insignificant relationship was observed between knowledge and awareness and the intention of PSIAHs to patronise Islamic banks in Nigeria. This

contradicts the result of the study by Abd Rahman et al. (2015) who confirmed the significant influence of knowledge on the attitude and intention towards halal cosmetic products in Malaysia. However, the result obtained is consistent with the findings by Abdullahi (2021) who confirmed an insignificant relationship between awareness and the intention of respondents in his study on the enhancement of financial inclusion through the adoption of microfinance bank in Nigeria. Also, findings this study are consistent with the results obtained by (Zauro 2017; Abiah and Wabekwa 2012).

The implication of the findings of the current study is that adequate knowledge and awareness about Islamic banking products and services in general and mudarabah products is low among the respondents. This could be explained by the result of the survey on Access to Financial Services in Nigeria by the Enhancing Financial Innovation and Access (2015) which showed that less than 1% of the Nigerians use IFPs and only about 7.5% of Nigerians are familiar with IFPs. Therefore, IBs and other stakeholders must increase awareness and public enlightenment on the benefits of Islamic banks in general and PSIAHs through collaboration with local radio houses, and other media houses with mass appeal to educate Nigerians about Islamic banking and its benefits.

Return Paid to PSIAHs and the Intention of PSIAHs to Patronise Islamic Banks

H6 hypothesized that return paid by Islamic banks to their PSIAHs has positive and significant influence on the intention of PSIAHs to patronise the banks. However, results obtained ($\beta = -0.79$; S. E = 0.102; CR = -0.773 ; $p = 0.440$) did not support the hypothesis, because although a positive relationship was observed between return and intention, the relationship was not significant enough to support the hypothesis. This is contrary to several past studies such as (Muhammad 2010; Abduh and Sukmana 2011; Hasan et al. (2012). However, result of this study is supported by results obtained by (Abdullah 2016; Mobin and Masih 2014) who confirmed that Islamic bank customers are more concerned with their banks' compliance with Shari'ah principles than the share of profit paid to them by the banks.

Also, result of H4 of the current study that showed the significance influence of religion on the intention of PSIAHs could explain the result of this hypothesis, because the respondents might be more concerned with the compliance of the banks to Shari'ah than receiving higher returns on their investment. They would prefer to forego receiving higher return than to sacrifice the compliance of the products to the Shariah Principles. However, IBs in Nigeria and other stakeholders should not be carried away by this finding because when we consider the increase in the number of Islamic banks in Nigeria (from the initial two banks to five as at December 2021), in the future, PSIAHs are likely to patronise the banks based on the return they stand to get from their investments due to increase in competition. In the same vein, IBs' corporate clients (not considered in the current study) patronise banks based on the share of profit they could get from their investments and the banks' image and reputation as confirmed by (Gait and Worthington 2008).

Banks' Reputation and the Intention of PSIAHs to Patronise Islamic Banks

H7 hypothesised that Islamic banks' reputation has positive and significant influence on the intention of PSIAHs to patronise islamic banks in Nigeria. however, result obtained ($\beta = 0.034$; S. E = 0.079; CR = 0.430; $P = 0.667$) although indicated positive relationship

between banks' reputation and intention, the influence was found to be insignificant. This contradicts the findings by (Rehman 2012; Gait and Worthington 2008) who established the existence of positive and significant relationship between Islamic banks' reputation and the intention of their customers to patronise them. Conversely, the result of the study by (Sayani and Miniaoui 2013; Hasan et al. 2012) support the result obtained in the current study, because they established that banks' reputation was not an important determinant in the selection of Islamic banks.

The result obtained under this hypothesis showed that reputation and image of IBs in Nigeria do not have significant influence on the intention of PSIAHs to patronise the banks. IBs are therefore advised to pay much attention to such other variables like compliance with Shari'ah in its operations, better quality service delivery and the likes that have been confirmed to influence the intention of PSIAHs.

Service Quality and the Intention of PSIAHs to Patronise Islamic Banks

H8 study predicted that the quality of service offered by Islamic banks has positive and significant influence on the intention of PSIAHs to patronise Islamic banks in Nigeria. Results obtained indicated that quality of service has significant influence on the intention of the respondents at 1% ($\beta = -0.271$; S. E = 0.110; CR = -2.472; $p = 0.013$) thereby supporting the hypothesis. Result of the current study corroborates the findings by Al-Hadrami et al. (2017a, b) who confirmed the significance of quality of service as an important selection criterion of Islamic banks among Bahrainis. Also findings by (Egresi and Belge 2017; Al-Hunnayan and Al-Mutairi 2016) are consistent with the result obtained in this study. The result revealed that PSIAHs in Nigeria place great emphasis on the quality of service received from their banks.

Therefore, aside being compliant with Shari'ah principles, Islamic banks in Nigeria must always strive to ensure that they offer their clients in general and PSIAHs in particular, the best quality of service in order to retain existing clients and attract new ones. Also, giving the fact IBs in Nigeria operate alongside conventional banks, it is imperative that the banks pay attention to the quality of services they offer to their clients, so that even if they could not surpass the quality of the services offered by the conventional banks, they could at least match it. Because as observed by Saad (2012) and Ali et al. (2010) there is strong and positive relationship between quality of service and the level of customer satisfaction both in Islamic and conventional banks, and that the relationship is stronger for Islamic bank customers compared to conventional banks.

Deposit Insurance and the Intention of PSIAHs to Patronise Islamic Banks

H9 predicted the existence of significant and positive relationship between deposit insurance paid on PSIA deposits and the intention of PSIAHs to patronise Islamic banks in Nigeria. Result obtained ($\beta = -0.079$; S. E = 0.059; CR = 1.339; $p = 0.181$) showed that the hypothesis was supported at 10% significance level. The result obtained agrees with the findings by Hamisu (2018), who reported that the introduction of deposit insurance that covers deposits of Islamic banks has significant impact on the total deposit of Islamic banks in Nigeria. This implies that withdrawal of deposit insurance on PSIA that have mudarabah as its underlying contract that expected the account holders to bear any loss from investing their deposits may lead to significant reduction in PSIA in the total deposits of Islamic banks.

Implication of this finding is that although PSIAHs whose deposit is based on mudarabah contract are expected to bear losses that could arise from the investment of their funds, the respondents are not ready to bear such losses yet. This might be due to the fact that Islamic banking is still new in Nigeria and as reported by Enhancing Financial Innovation and Access (2015), only about 7.5% of Nigerians are familiar with IFPs and as such could not be familiar with the specificities of the products, hence the influence of deposit insurance on their intention to patronise IBs. Therefore, the Central bank should not be in a hurry to reclassify PSIAHs to investments as was done by Bank Negara Malaysia (BNM) in 2013 with the enactment of the Islamic Financial Services Act (IFSA) (Bank Negara Malaysia 2013). This is because even in the Malaysian case it took 30 years from the beginning of the operation of Islamic banks in the country (1983–2013) before mudarabah accounts were fully classified as investments that should bear losses that could arise from the investment of their deposits.

Transparency and Disclosure and the Intention of PSIAHs to Patronise Islamic Banks

H10 of the current study postulated that transparency and disclosure by the Islamic banks has positive and significant influence on the intention of PSIAHs to patronise the banks in Nigeria. However, results obtained ($\beta = 0.129$; S. E = 0.102; CR = 1.265; $p = 0.206$) showed a positive but insignificant relationship between the variables which goes contrary to the results of the some past studies including (Alaeddin et al. 2017; Alhammadi et al. 2018) which showed significant relationship between transparency and disclosure and the intention of PSIAHs to patronise Islamic banks, because PSIAHs as investors (not ordinary depositors) have incentives to monitor the performance of their respective Islamic banks in order to protect their investment and to also ensure that the share of profit the banks pay them is fair and is based on the banks' actual net profit. However, the result obtained is consistent with the findings by Abdallah and Bahloul, (2021) who studied the impact of disclosure and shariah governance on the financial performance of Islamic banks in MENASA region and concluded that disclosure has negative impact on the profitability of Islamic banks. Abdallah and Bahloul (2021) expatiated further that PSIAHs might not be happy when their banks disclose the return they earn because other potential investors might exploit the opportunities, thereby dilute their earnings.

The result obtained implied that that PSIAHs in Nigeria who have been likened to investors than depositors are not significantly influenced by the level of transparency and disclosure by their respective Islamic banks. Consequently IBs in Nigeria should understand that although PSIAHs share some characteristics with investors, that should be significantly influenced by their banks' level of transparency and disclosures and the share of profit from their investment accounts, they are more concerned with the banks' compliance with Shari'ah principles (measured by the religiosity construct), the quality of service offered by the banks' and safety of their deposits (measured by deposit insurance construct).

Table 6. Results of hypotheses testing and decisions

Hypothesis	IV	DV	Estimate	S.E.	C.R.	P-value	Decision
H ₁	Attitude	Intention	0.620	0.105	5.910	***0.000	Supported
H ₂	Subjective norm	Intention	0.002	0.030	0.071	0.943	Not supported
H ₃	P B control	Intention	0.159	0.089	1.779	0.075**	Supported
H ₄	Religiosity	Intention	0.396	0.103	3.844	***0.000	Supported
H ₅	Knowledge & awareness	Intention	-0.99	0.152	-0.652	0.514	Not supported
H ₆	Return	Intention	0.79	0.102	0.773	0.440	Not supported
H ₇	Reputation	Intention	0.034	0.079	0.430	0.667	Not supported
H ₈	Quality of service	Intention	0.271	0.110	2.472	***0.000	Supported
H ₉	Deposit insurance	Intention	0.079	0.059	1.339	0.181*	Supported
H ₁₀	Transparency & disclosure	Intention	0.129	0.102	1.265	0.206	Not supported

The findings by the current study provided useful and significant insights into factors that affect the intention of PSIAHs to patronise Islamic banks in Nigeria. Results obtained as shown in table 6 above showed interesting results. It showed that PSIAHs have positive attitude towards Islamic banks and believed they have what it takes in terms of resources to patronise the banks, while friends and relatives play no significant role in influencing the intention of PSIAHs to patronise the banks. In the same vein, the result showed that religious belief, deposit insurance and the quality of service offered by Islamic banks positively and significantly influence PSIAHs' intention to patronise Islamic banks, while the return paid to the PSIAHs as their share of profit, their level of knowledge and awareness of Islamic banking products and service and about mudarabah contract, and disclosure and transparency by the Islamic banks have no significant influence on the intention of PSIAHs to patronise the banks.

5 Conclusion and Recommendations

5.1 Conclusion

The current study examined factors that influence the intention of PSIAHs to patronise Islamic banks in Nigeria by obtaining data from the PSIAHs of Jaiz bank plc and Sterling bank NIB window (being the oldest surviving Islamic banks in Nigeria) from three states of Nigeria that are adjudged the most populous, the commercial hubs of Nigeria and where the banks have the most branches and more customers. The study found that attitude, PBC, religiosity, service quality and deposit insurance have significant and positive influence on the intention of PSIAHs to patronise Islamic banks in Nigeria. On the other hand, the study found that SN, return paid to PSIAHs, knowledge and awareness, reputation and transparency & disclosure have negative and insignificant influence on the intention of PSIAHs to patronise Islamic banks in Nigeria. The findings are in line with the findings by previous studies in other jurisdictions as highlighted above.

5.2 Recommendations

From the findings of this study, we recommend that Islamic banks in Nigeria and other stakeholders should increase efforts towards educating the public in general and Islamic bank customers in particular on the advantages and the value proposition of PSIA (mudarabah based account) as a saving and investment platform. Because based on the findings of this study, there is little knowledge and awareness about the concept of mudarabah and its benefits and about Islamic finance in general among the respondents of the study, hence the negative and insignificant relationship observed between knowledge and awareness and the intention of PSIAHs. Also, the findings of the current study showed that PSIAHs cared more about the compliance of their banks to Shari'ah principles and the quality of service they receive from the banks, than they care about the returns they earned from their investment, their bank's level of transparency and their banks' reputation. Consequently, it is recommended that Islamic banks in Nigeria should ensure that their operations always comply with the principles of Islamic commercial jurisprudence because their customers are very much interested in their compliance with Shari'ah principles than with anything else. The banks also need to improve on the quality of the services they offer their customers especially giving the fact Islamic banks in Nigeria operate alongside conventional banks and compete with them for customers' patronage.

5.3 Contribution of the Study

The findings of this study have practical, theoretical and methodological implications. The current study extended TPB by introducing seven (7) new variables of Religiosity, Knowledge and Awareness, Deposit Insurance, Returns paid to PSIAHs, Reputation, Quality of Service, and Disclosure & Transparency as precursors to people's intention. The findings showed that attitude and PBC have positive and significant influence on the intention of PSIAHs while SN has insignificant on PSIAHs' intention to patronise

Islamic banks. Also, religiosity, service quality and deposit insurance were found to have positive and significant influence on the intention of PSIAHs. The findings also have practical influence to both the Islamic banks and the CBN. For the Islamic banks, the findings have identified variables that matter most to their customers especially PSIAHs. The banks' future strategies and marketing campaigns in attracting new customers and retaining existing ones need to consider these important variables. For the methodological contributions, the current study is also unique and novel because to the best of the researcher's knowledge, it is the first to understudy the behavioural intention of PSIAHs especially in Nigeria using AMOS-SEM.

5.4 Limitations of the Study and Implication for Future Research

The study focused only on PSIAHs from of Jaiz bank and Sterling bank NIB window in the states of Lagos, Abuja and Kano. Therefore, it is difficult to generalize the findings among all Nigerians given that Nigeria has 37 states. It is therefore expected that future researchers would expand the scope of the study to reach other states not covered in the current study Also, the current research only elicited data from individual PSIAHs and did not include corporate clients. The findings and conclusions of the study may not be appropriate for generalization of all customers and PSIAHs of all the Islamic banks in Nigeria, especially now that we have three (3) full-fledged Islamic banks and two Islamic windows (of conventional banks). Consequently, a broader study that covers the PSIAHs of all the Islamic banks in Nigeria including both individuals and corporates with an increased sample is recommended for generalization in Nigeria. It is equally recommended that future studies that cover clients of all the existing Islamic banks should try the model of the study again, because there is the possibility that hypotheses not supported currently might be supported in the future, because as the industry grows, it is expected that knowledge and awareness would increase among the banks' clients, and as the customers become more knowledgeable about Islamic banking products and services, they would demand for more accountability and transparency from the banks before deciding which bank to patronise. The banks' reputation might also play key role in the selection of banks among Islamic banking customers. The banks would compete in paying their investors and their PSIAHs higher returns.

Appendix

Appendix 1: Rotated Matrix

Rotated Component Matrix^a

	Component									
	1	2	3	4	5	6	7	8	9	10
SQL2	0.762									
SQL3	0.727									
SQL4	0.716									
SQL5	0.716									
SQL6	0.668									
SQL8	0.660									
SQL7	0.658									
SQL1	0.638									
KAW2		0.761								
KAW3		0.740								
KAW1		0.735								
KAW5		0.717								
KAW4		0.661								
REL3			0.779							
REL4			0.748							
REL1			0.739							
REL5			0.698							
REL2			0.688							
TAD6				0.767						
TAD5				0.765						
TAD7				0.711						
TAD2				0.634						
TAD1				0.565						
TAD4				0.564						
SN4					0.862					
SN3					0.843					
SN5					0.837					
SN2					0.787					
RET7					0.583					
ATT4						0.712				
ATT3						0.693				
ATT2						0.681				
ATT5						0.655				
ATT1						0.562				
PBC5							0.704			
PBC4							0.692			
PBC3							0.687			
PBC2							0.665			
RET4								0.708		
RET3								0.649		
RET8								0.633		
RET2								0.605		
DIS2									0.765	
DIS5									0.696	
DIS3									0.693	
DIS1									0.578	
REP2										0.808
REP1										0.623
REP3										0.603

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 8 iterations.

Appendix 2: Reliability Test (Result of Cronbach's Alpha Test)

Construct	Items	Corrected Items total correlation	Cronbach's alpha if item deleted	Cronbach's alpha	Sample size
Religiosity	Religion 1	0.704	0.705	0.778	30
	Religion 2	0.505	0.751		
	Religion 3	0.503	0.750		
	Religion 4	0.413	0.787		
	Religion 5	0.566	0.734		
	Religion 6	0.538	0.741		
Reputation	Rep 1	0.606	0.712	0.772	30
	Rep 2	0.684	0.680		
	Rep 3	0.670	0.682		
	Rep 4	0.655	0.690		
	Rep 5	0.149	0.841		
Knowledge and awareness	KaAw 1	0.083	-0.178	-0.126	30
	KaAw 2	0.206	-0.314		
	KaAw 3	-0.206	0.100		
	KaAw 4	-0.045	-0.107		
	KaAw 5	-0.200	0.231		
	KaAw 6	0.140	-0.407		
Return	Ret 1	0.805	0.839	0.863	30
	Ret 2	0.695	0.849		
	Ret 3	0.357	0.867		
	Ret 4	0.444	0.867		
	Ret 5	0.560	0.857		
	Ret 6	0.558	0.857		
	Ret 7	0.644	0.851		
	Ret 8	0.543	0.858		
	Ret 9	0.535	0.858		
	Ret 10	0.576	0.856		
	Ret 11	0.435	0.865		
	Ret 12	0.545	0.858		
Deposit insurance	DepI 1	0.723	0.932	0.934	30
	DepI 2	0.671	0.934		
	DepI 3	0.773	0.926		
	DepI 4	0.807	0.923		

(continued)

(continued)

Construct	Items	Corrected Items total correlation	Cronbach's alpha if item deleted	Cronbach's alpha	Sample size
	DepI 5	0.852	0.921		
	DepI 6	0.887	0.915		
	DepI 7	0.844	0.919		
Transparency and disclosure	TaD 1	0.741	0.794	0.848	30
	TaD 2	0.447	0.882		
	TaD 3	0.731	0.800		
	TaD 4	0.647	0.821		
	TaD 5	0.781	0.785		
Attitude	Att1	0.830	0.703	0.826	30
	Att2	0.622	0.794		
	Att3	0.587	0.823		
	Att4	0.610	0.799		
Subjective norm	SN1	0.933	0.943	0.960	30
	SN2	0.876	0.953		
	SN3	0.885	0.951		
	SN4	0.809	0.964		
	SN5	0.942	0.942		
Perceived behavioural control	PBC 1	0.693	0.850	0.874	30
	PBC 2	0.641	0.864		
	PBC 3	0.604	0.877		
	PBC 4	0.786	0.836		
	PBC 5	0.863	0.820		
	PBC 6	0.591	0.867		

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The Evolution of the National Strategy for Integrity and Anti-corruption in Jordan From 2008 to 2025

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1 Introduction

The phenomenon of corruption is one of the most negative and paramount phenomena facing all countries. This phenomenon motivates the demand for the provision of insurance against its risks, which could destroy the country's economy. Countries worldwide agreed on the need to develop an institutional framework to fight against this problem through anti-corruption development [1].

Jordan is making great efforts to prevent corruption. The Anti-Corruption Commission was established as an independent body in line with the Political Anti-Corruption Department of Jordan, following the United Nations Convention against Corruption Ratification Act No. 28 of 2004 and the Ombudsman Bureau in 2008. His Majesty King Abdullah II Ibn Al-Hussein sent a royal letter to the Prime Minister on the 26th of June 2005, in which a law was promulgated to establish an anti-corruption commission. Accordingly, the Anti-Corruption Commission Act No. 62 was promulgated in 2006, and a national anti-corruption strategy (2008–2012) was launched at a national conference in August 2008 [2]. Furthermore, the Integrity and Anti-Corruption Commission's vision was a national environment that upholds integrity and rejects corruption [3].

2 The Objectives of the Commission

The commission tries to prevent corruption by shutting down its sources through effective and proactive measures. National integrity standards include the rule of law, accountability, liability, transparency, justice, equal rights, equal opportunities, and good governance [2]. Therefore, the Anti-Corruption Commission is associated with the following strategic objectives.

- Strengthening the sound application of codes of conduct in public administration and ensuring its integration.
- Handle complaints and grievances by the law.
- Prevent nepotism and favoritism.

3 The National Strategies of Integrity and Anti-corruption

This research aims to present the stages of development of the National Integrity and Anti-Corruption Strategy from 2008 to 2025 [2–5] according to reports, research, and studies as follows:

Part 1: The National Strategy of Integrity and Anti-corruption 2008–2012.

Part 2: The National Strategy of Integrity and Anti-corruption 2013–2017.

Part 3: The National Strategy of Integrity and Anti-corruption 2017–2025.

Part 4: The (Updated) National Strategy of Integrity and Anti-corruption 2020–2025.

According to National Strategies of Integrity and Anti-Corruption, Table 1 shows the themes of each strategy separately.

3.1 The National Strategy of Integrity and Anti-corruption Strategy 2008–2012

The commission focused in this period (2008–2012) on the success of preventing corruption through a set of policies and tools that varied between research and studies aimed at identifying forms of corruption in Jordan. Methods for preventive action have also been implemented, and scrutiny committees such as local councils were set up. The commission also worked to guide scientific research in the field of combating and preventing corruption. In implementing these efforts, a national conference was held in cooperation with the University of Jordan, entitled “Corruption and its effects on economic and social development”. One of the most important measures to prevent corruption is to make citizens aware of the devastating effects of corruption on the country. To that end, the commission has strengthened the participation of national institutions in efforts to combat and prevent corruption by signing several memorandums of understanding with a range of official bodies. It also amended the schools’ tenth-grade curricula by including topics on the Anti-Corruption Commission to raise the new generation to the concepts of integrity and transparency [2].

Although the taken measures are important, they might not be sufficient to prevent the perpetrators of corruption. This requires legal action to enforce the provisions of the law. The prosecution of the perpetrators of corruption is carried out either based on communication or complaint by a whistleblower or an investigation conducted by the commission. In the case of communication or complaint of a corruption crime, the commission investigates the information received after verifying its reliability, which may lead to the preservation of the complaint in the absence of evidence of corruption [2].

3.2 The National Strategy of Integrity and Anti-corruption Strategy 2013–2017

This strategy extended and developed the previous strategy by assessing the risks and causes of corruption in Jordan, the spread of nepotism and favouritism, and society’s tolerance of this phenomenon. A complete plan was prepared for the implementation of the 2013–2017 strategy, including a mechanism to issue regular reports on the situation of corruption, the development of events to enhance integrity and transparency in schools and universities, the development of a methodology for assessing the risks of corruption and strengthening the role of internal control [4].

Table 1. The national strategy of integrity and anti-corruption

Period	The themes
2012-2018	<ol style="list-style-type: none"> 1. Strengthening the capacity of the Anti-Corruption Commission 2. Corruption prevention 3. Raising awareness and education on the phenomenon of corruption and efforts to combat it. 4. Law enforcement 4. Coordinating efforts to fight corruption 5. International cooperation
2017-2013	<ol style="list-style-type: none"> 1. Raising awareness and education on the phenomenon of corruption and efforts to combat it 2. Strengthening corruption prevention 3. Strengthening the capacity of the Anti-Corruption Commission 4. Enabling community participation in anti-corruption activities and promoting integrity 5. Efficiently investigating and prosecuting corruption cases 6. Strengthening international anti-corruption cooperation 7. Developing national legislation in line with international anti-corruption standards and requirements and ensuring its efficient implementation
2025-2017	<ol style="list-style-type: none"> 1. Activating the code of national integrity and consolidating integrity principles and standards to create a national anti-corruption environment 2. Creating a national environment that contributes to the fight against corruption by raising national awareness of society, institutions and individuals 3. Prevent corruption by shutting down its sources and limiting its impact through applying effective preventive measures 4. The dedication to the enforceability of the Integrity and Anti-Corruption Act 5. Improve the provisions of current and future legislation provisions by bridging existing gaps that could lead to corruption 6. Strengthen partnerships and integrate efforts with all national ones and international partners 7. Strengthening media and communication channels 8. Developing the commission's institutional capacity and improving its performance in ways that reflect the achievements of the commission
2025-2020	<ol style="list-style-type: none"> 1. Activate the national integrity system and ensure compliance by public administration 2. Enhancing the efficiency of preventive action against corruption 3. Strengthening the management of local and international family partnerships 4. Institutional and human capacity development

3.3 The National Strategy of Integrity and Anti-corruption 2017–2025

Based on the instructions of His Majesty King Abdullah II Bin Al Hussein regarding the importance of preventing corruption resources, the strategy (2017–2025) was in line with national plans to activate the National Integrity and Anti-Corruption System. A participatory approach was followed in developing the strategy, which ensured the involvement of all affected parties in strengthening and promoting the national integrity and anti-corruption system. Many resources were used as a frame of reference for the

strategy and several discussions between the working team and the experts through brainstorming sessions [3].

3.4 The (Updated) National Strategy of Integrity and Anti-corruption 2020–2025

Based on the Integrity and Anti-Corruption Commission's belief in the importance of the strategic approach and its effective role, the Strategy for the years (2017–2025) has been developed and updated. The update has been based on the developments, changes, and new information from the local and international environment, as well as on the requirements for continuous improvement in the organizational performance of the commission. This also comes as a re-evaluation of the strategic projects of the commission. Furthermore, the Strategy for the years (2017–2025) has adopted a participative approach while reviewing the updated strategy, as it has been prepared by involving the stakeholders engaged in promoting the integrity and anti-corruption system on the national level [5].

4 Conclusion






The objective of this study is to present the stages of development of the National Integrity and Anti-Corruption Strategy. This study showed significant results by comparing the national strategies implemented from 2008 to 2025. With the results of this study, all stages of the development of the National Strategy have been shown to have the same objective of combating corruption and continuous improvement, regardless of the variety of methods. Future researchers could investigate the effectiveness of the National Integrity and Anti-Corruption Strategies in detecting and deterring corruption. In addition, future researchers could conduct a comparative study between national and international strategies for detecting and deterring corruption.

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Tax Burden in the System of Investment Appeal Assessment of an Enterprise in the Context of Globalization and Transformation of National Economy

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Abstract. Modern challenges of Ukrainian tax legislation force a new approach to the issue of assessing the investment attractiveness of Ukrainian enterprises. The method of assessing the investment attractiveness of the enterprise depends on the goals facing the investor. To determine the main components of the enterprise's investment attractiveness, it is worth applying the method of expert assessments. Indicators of the enterprise's investment attractiveness include indicators of profitability, liquidity and solvency, business activity, financial stability. It is effective to apply an integral approach to assessing the investment attractiveness of the enterprise, taking into account the level of the tax burden. The approach is based on a set of interconnected stages and the application of the method of calculating financial ratios. An integral approach makes it possible to evaluate the relevant general indicator of the investment attractiveness of the enterprise, determine its level and create a basis for making effective management decisions. The level of investment attractiveness of the enterprise using a scale. The scale includes five levels: high, sufficient, satisfactory, low, unattractive. The specified levels include a description of the state of the enterprise in accordance with the established level of investment attractiveness and tax burden. The practical application of the proposed scale will improve the effectiveness of the implementation of the enterprise's financial strategy for the long term and will enable continuous monitoring and evaluation of the state of investment attractiveness. The practical significance of the proposed approach was tested on the example of a Ukrainian company – «Podillia-Invest City» LLC.

Keywords: Investments · Investment appeal · Assessment of investment appeal · Tax burden · Integrated indicator · Assessment of tax burden · Liquidity · Solvency · Financial stability · Profitability

1 Introduction

Investment appeal is a key factor in ensuring an effective investment process at all levels. Modern challenges of Ukrainian tax legislation force a new approach to the issue of

assessing the investment attractiveness of Ukrainian enterprises. The assessment of the level of investment appeal is one of the most controversial issues in scientific literature and depends on the goals facing the investors. Despite the significant scientific achievements, there are still many unresolved issues to assess the level of investment appeal of the enterprise. Based on the analysis of economic sources (Meshkov and Mentel 2014; Korytko and Kruk 2015; Matyushenko 2013), we can distinguish various approaches to assessing the investment appeal of the enterprise: the method of coefficients, the method of complex estimation, the method of enterprise ratings sum, financial indicators analysis method, objective analysis. However, the practical implementation of these approaches is complicated by the high requirements for the quality and volume of the primary information base, the preparation and processing of which requires special additional research, significant time and money resources. The objective of the research is to substantiate the nature and approaches to assessing the level of investment appeal of the enterprise based on the indicators of financial condition of the business entity and its level of tax burden. The object of the research is the investment appeal of the enterprise in modern business conditions. The subject of the research is the assessment model of the investment appeal of the enterprise.

The article examines the essence of investment appeal and tax burden on enterprises. The indicators of profitability, liquidity and solvency, business activity, financial stability are considered to be the main components of investment appeal of the enterprise. The level of investment attractiveness “Podillya-Invest City” LLC (Ukraine) was assessed based on the calculation of the integral indicator, taking into account the level of the tax burden. A four level scale for assessing the investment appeal of the enterprise (high, sufficient, satisfactory, low) is suggested. It indicates the state of the enterprise activity in accordance with the established level of investment appeal and tax burden.

2 Relevant Research

An integral part of the development of any modern enterprise is to ensure its investment appeal. In the economic literature there are many definitions of the concept of “investment appeal of the enterprise”. Economic sources offer us many definitions of the concept of “investment appeal of the enterprise”. Vinichenko (2010) determining the investment appeal of the enterprise, uses a comprehensive approach which takes into account the following factors: image of the enterprise, financial condition, financial result, investment risk, intensity of innovative activity. He claims, the better the financial condition of the company is, the higher is the level of its investment appeal. However, this identification is quite controversial. It is believed that positive financial results can be obtained in some period of time, based on the effective use of investment resources.

Sidorov (2019) considers the investment appeal of the enterprise from the standpoint of a comprehensive assessment of the impact of exogenous and endogenous factors, and the investment risk level in the process of enterprise development. Thus, he expands this concept, taking into account the influence of the external impact factor of the enterprise activity. Yurieva (2022) regards the investment appeal as reaching a compromise of interests between investor and enterprise. It should be mentioned that the compromise of interests between the investor and the company’s representatives is the result of certain

mutually beneficial agreements. In practice, it is quite often, only indirectly affects the investments appeal of the enterprise. Blanc (2011) gives the clearest definition of the concept of “investment appeal of the enterprise”. He noted the importance of the analysis of the investment attractiveness of the company based on such as financial indicators as financial stability, profitability, asset liquidity and asset turnover.

In the conditions of economic transformation, integration of the country into the world community, implementation of large investment projects, the issue of the tax burden impact on the investment appeal of the enterprise becomes a priority. Despite the fact that some tax rates related to investment projects are at a level lower in Ukraine than in many countries, business representatives consider the high tax burden as one of the main destructive factors hindering investments. This contradiction is due to the ambiguity of approaches to the interpretation of the concept of “tax burden” and its assessment. A review of the scientific economic literature suggests that there is no consensus among domestic scholars on the nature and economic content of this concept, which complicates its understanding and rises up different methodological approaches to calculating the tax burden. For example, in the financial dictionary the tax burden is defined as the share of all tax payments for a certain time (fiscal year) for income of the taxpayer (Bryukhovetskaya and Buleev 2019).

Analyzing the concept Novikov (2011) determines the tax burden as a measure of the impact of tax payments on the financial condition of the enterprise. Kolisnichenko (2010) argues that the tax burden is part of business income, which is irrevocably withdrawn by the state through the system of taxes and fees. Sokolovskaya (2006) considers the tax burden as the effects of taxes on the economy as a whole and on its individual payers as well. It is associated with economic constraints arising from the tax payments and funds diversion from other possible uses.

Tyshchenko and Yenina-Berezovska (2011) claim that data analysis of the tax burden on previous periods is the basis for an operating enterprise in the process of making sound management decisions in future. The tax field of the enterprise allows to predict the impact of the tax burden on the financial result and cash flows when changing the conditions of economic activity, which is one of the important indicators of investment appeal of the enterprise. Proper use of instruments provided by tax legislation can ensure not only the safety of financial savings, but also the ability to finance business expansion, new investments by saving on tax payments or even by returning part of the funds paid to the budget.

Thus, we propose to interpret the tax burden as the level of tax pressure on the company by the state, which affects its investment appeal, as it changes the amount of income that an investor can receive when investing in this sphere. Authors define the “investment appeal of the enterprise” as a comprehensive assessment of the future investment medium in terms of efficient use of available financial resources as well as the tax burden level in global challenges.

Various aspects related to the assessment of the investment appeal of the enterprise are analyzed in the scientific works of both domestic and foreign economists. Goryacha (2016), assessing the investment appeal of the enterprise, focuses on market activity indicators of the enterprise and defines indicators of return on equity, market value of securities, the amount of dividends paid. Bardadin (2017) considers the importance of

financial condition indicators, indicator of property status of the enterprise, indicators of production and human resources, in addition to indicators of market appeal of the enterprise. To assess the investment appeal of the enterprise, we suggest using the method of calculating the integrated indicator on the basis of financial ratios evaluation. The components of the proposed approach are: elements of the statistical method (additive convolution, root mean square deviation, coefficient method); method of expert evaluations. It is considered to be the simplest and the least time consuming method which allows you quickly tracking negative trends in the company's activities.

3 Obtained Research Results

The method of integral assessment includes the analysis of financial indicators characterizing the investment attractiveness of enterprises. In order to determine the most significant groups of financial ratios, we used the method of expert assessments based on a questionnaire survey. The survey was conducted at 20 Ukrainian enterprises. Enterprises were selected according to the random observation method. Questionnaires were processed using MS Excel software. According to the results of the survey, four groups of financial indicators were distinguished. The first group includes indicators that characterize the efficiency of the enterprise (88% of experts), thus: profitability, profitability of sales, return on equity, and return on assets. The second group includes financial indicators that characterize the liquidity and solvency of the enterprise (93% of experts): absolute liquidity ratio, quick liquidity ratio, current liquidity ratio, coverage ratio. These indicators indirectly assess the probability of return on investment. The investment appeal of the enterprise is guaranteed by the reliability of the financial condition. Therefore, the third group of indicators is about financial stability (89% of experts): autonomy ratio, attracted capital ratio, financing ratio and financial stability ratio. The last group of indicators includes the assessment of the business activity of the enterprise (91% of experts): the turnover ratio of assets, the turnover ratio of equity, the turnover ratio of accounts payable, the turnover ratio of receivables.

All groups of indicators for assessing the investment appeal of the enterprise, as well as inner indicators of these groups, are assigned weighting factors. Weighting factor is a numerical relative indicator that characterizes a weight or importance of its manifestation on the investment appeal of the enterprise. Like the cut-off values, the weighting factor can be adjusted. It depends on the time, the specific political and economic situation in the country, and other factors. Therefore, its determination has a probable origin.

The method of expert assessments is considered to be the most common for measuring weighting factor. The experts determine the importance of financial indicators and groups of indicators, by assigning them a weighting factor. To summarize the experts' assessments, we propose to use the method of additive convolution, which is used in the case when the indicators are independent in their significance and can be measured on a quantitative scale.

The value of relative significance of indicators (weight coefficient) is determined by the following formula:

$$v_i = \frac{\sum_i^m a_{ij}}{\sum_i^m \sum_j^n a_{ij}} \quad (1)$$

where a_{ij} – is the score of the significance of the i -indicator which is given by the j -expert;

j – Expert assessment;

i – Value of a criterion;

n – Number of indicators;

m – Number of experts.

It is advisable to use the concordance coefficient to assess the consistency of experts' responses. The value of the concordance coefficient ranges from 0 to 1. With a 'zero' value of the coefficient, there is no connection between the assessments of different experts, i.e. there is no consistency of opinion. If the value is 'one', the opinions of experts are unanimous. The value of the total score for each financial indicator (R_{ij}) in the group of indicators is defined as the product calculated by the indicator belonging to the group and the weights that determine the degree of influence of the criteria on investment appeal. The next step is quantitative analysis of the group of financial indicators of investment appeal of an enterprise. The generalizing level of the i -group of financial indicators of investment appeal of the enterprise is to be calculated by the formula:

$$R_j = \frac{\sum_i^n v_i \cdot w_i}{n_i} \quad \text{or} \quad R_j = \frac{\sum R_{ij}}{n_i} \quad (2)$$

where R_j – is the general level of the j -group of financial indicators of investment appeal of an enterprise;

R_{ij} – Generalized level of the i -indicators in the j -group;

v_i – Weighting coefficient of the i -indicators;

w_i – The value of the i -indicators in the group of financial indicators;

n_i – The number of indicators of the i -group.

To obtain integrated estimates, the initial values of each group of indicators are reduced and unified to a form suitable for comparison. Primarily, this is due to the diversity of indicators i.e. stimuli-indicators tend to increase, and disincentive-indicators tend to decrease. Besides, each indicator relies on their own calculation strategy. To ensure the comparability of indicators, they should be normalized, which is a transition to such a scale of measurements, when the "best" value of the indicator corresponds to the value of '1', and the "worst" to the value of '0':

$$l_j = 1 - R_i \quad (3)$$

where l_j – is the integrated indicator of the j -group of financial indicators of investment appeal of the enterprise.

Concretization of weight coefficients of groups of financial indicators (x_j) of investment appeal of an enterprise is carried out on the basis of expert assessments method, which was described above. We propose to calculate the value of the final assessment of the investment appeal of an enterprise using an integrated indicator, by summing the product of the generalized level and the weighting factor by groups of financial indicators. Thus, the calculation of the integrated indicator of investment appeal of an enterprise is carried out according to the formula:

$$IP = \sum_{i=1}^n l_j \cdot x_j \quad (4)$$

where IP – an integrated indicator of investment appeal of an enterprise;

x_j – represents weight coefficients of the j -group of financial indicators of investment appeal of an enterprise.

Taking into account the importance and impact of taxes on the behavior of enterprises, the level of tax burden is one of the indicators of investment appeal of an enterprise. Tax deductions reduce the amount of current assets of an enterprise, as well as limit the ability to invest retained earnings in its further development. The level of tax burden of different categories of legal entities is one of the factors that determine the policy of investor's capital allocations.

To measure the level of tax burden of an enterprise the following formula is used:

$$TB = \frac{T}{GR} \quad (5)$$

where TB – tax burden;

T – Taxes paid by an enterprise;

GR – Gross revenue of an enterprise.

The practical application of the proposed assessment of investment appeal of an enterprise was tested and verified at “Podillya-Invest City” LLC, Ukraine.

“Podillya-Invest City” LLC is involved in construction of residential and non-residential buildings. The scope of residential buildings includes one-apartment buildings, multi-apartment buildings, including multi-storey blocks of flats. Non-residential buildings are represented by industrial-purpose buildings, such as factories, plants, workshops, assembly shops, etc., hospitals, schools, office premises, hotels, shops, shopping arcades, restaurants, airport buildings, indoor sports complexes, garages (including underground ones), warehouses, religious buildings. The company is also involved in installation and erection of prefabricated structures on construction sites; reconstruction, restoration and redecoration of residential buildings.

The results of calculations of general level for the group of financial indicators of investment appeal for “Podillya-Invest City” LLC in 2021 are represented in Table 1.

Table 2 shows the investment appeal index of “Podillya Invest City” LLC in 2021.

“Podillya-Invest City” LLC (Ukraine) performs its activities according to a simplified taxation system and is a single-tax payer in the third group. The company pays a single tax at the rate of 3% as well as VAT. Based on the analysis of the company's financial statements and using formula (4), the level of tax burden of “Podillia-Invest City” LLC, Ukraine, was determined. Its value in 2021 was 0.3. The study of the tax

Table 1. Calculations of the general level of the group of financial indicators of investment appeal for “Podillya-Invest City” LLC (Ukraine) in 2021

Indicator group	Financial indicators by groups	Value (w_i)	Weight coefficient (v_i)	General level (R_j)
Enterprise returns	Cost Effectiveness = Net Income/Net Revenue	0,20	0,1	0,226
	Sales Return = Net Income/The Amount Of Revenue Received From The Sale Of Products	0,05	0,2	
	Return On Equity = Net Income/Average Annual Cost Of Equity	0,44	0,3	
	Assets Return = Net Income/Average Annual Value Of Assets	0,15	0,4	
Business activity	Assets Turnover Ratio = Net Sales/Average Total Assets	3,68	0,3	0,827
	Equity Turnover = Revenue From The Sale Of Products/Average Annual Amount Of Equity Capital	0,43	0,3	
	Accounts Payable Turnover = Net Income Sales/Average Accounts Receivable	3,85	0,2	
	Accounts Receivable Turnover Ratio = Net Credit Sales/Average Accounts Receivable	5,53	0,2	

(continued)

Table 1. (continued)

Indicator group	Financial indicators by groups	Value (w_i)	Weight coefficient (v_i)	General level (R_j)
Liquidity and solvency	Absolute Liquidity = Cash And Current Financial Investments/Current Liabilities	0,35	0,4	0,486
	Quick Liquidity = Liquid Assets/Current Liabilities	2,23	0,2	
	Current Liquidity = Current Assets/Current Liabilities	1,79	0,3	
	Coverage Ratio = Current Assets/Short-Term Liabilities	1,56	0,1	
Financial stability	Self-Sustainment Ratio = Equity/Total Capital	0,51	0,4	0,398
	Debt Capital = Current And Long-Term Liabilities/Assets	0,49	0,1	
	Financing Ratio = Liabilities/Equity	0,79	0,2	
	Financial Stability = Equity And Long-Term Liabilities/Liabilities	0,66	0,3	

Source: Authors' calculations based on financial reporting "Podillya Invest City" LLC (Ukraine)

Table 2. Integral index of investment appeal of "Podillya-Invest City" LLC (Ukraine) in 2021

Indicator group	Enterprise returns	Business activity	Liquidity and solvency	Financial stability
Weight coefficient (x_j)	0,3	0,2	0,2	0,3
Integral index of investment appeal	0,449			

Source: Authors' calculations based on financial reporting "Podillya Invest City" LLC

burden of the company proves that the company has chosen the optimal taxation system i.e. taxes and fees are paid on time, without penalties and without accounts payable to the budget and extra budgetary funds. The accounting policy meets the requirements and norms of international accounting standards and financial reporting, national regulations (standards) of accounting and other accounting regulations. To reduce the tax burden, “Podillya-Invest City” LLC (Ukraine) uses modern management tools, including staff outsourcing. This allows the enterprise to optimize the costs of the enterprise by elaborating own tax payment policy including a single social fee.

4 Conclusions and Recommendations

The proposed methodological approach based on measuring of integral index of investment appeal of the enterprise which takes into account the level of tax burden allows not only to make a generalized comparative assessment of performance of an individual enterprise for the given period, but also provides multi-dimensional comparative analysis of investment appeal of several enterprises operating in one industry.

According to the results of the research, level characteristics of the of investment appeal of the enterprise are identified on the basis of Podillya-Invest City LLC determined by quantitative and linguistic evaluation of the scale (Table 3). The assessment scale of investment appeal of the enterprise ranks its level in terms of financial stability, solvency, profitability and liquidity of the enterprise. There are four levels of investment appeal of the enterprise (high, sufficient, satisfactory, low), which influence the enterprise investment decision.

Practical application of the proposed scale will improve the effectiveness of the financial strategy of an enterprise for the future and will enable continuous monitoring and evaluation of investment appeal. The investment appeal of “Podillya-Invest City” LLC is sufficient, which allows us to consider the company as a subject with investment potential. However, based on the analysis, it should be noted that the company still needs to pay attention to the inventory management system, review its credit policy, which will reduce receivables and increase working capital of the company. Implementation of the suggested measures will strengthen the market position of the company and increase the level of its investment potential. In order to consistently and clearly implement the concept of tax planning at the enterprise, application of technological checklist for tax planning is proposed. In order to consistently and clearly implement the concept of tax planning at the enterprise, it is advisable to use technological maps of tax planning, taking into account the level of investment attractiveness of the enterprise. The development of which will be the object of future scientific research.

Table 3. Level characteristics of investment appeal of the enterprise based on the assessment of financial indicators and tax burden

Levels of investment appeal	Level of tax burden	Name	Enterprise activity characteristics according to the established level of investment appeal
0,76–1,00	0,2–0,1	High	The enterprise is profitable for a long period, financial stability, liquidity and solvency are ensured, the optimal taxation system is chosen
0,41–0,75	0,21–0,3	Sufficient	Moderate and stable enterprise development, characterized by self-financing and long-term debt capital, the effective tax policy of the enterprise is developed
0,26–0,4	0,31–0,4	Satisfactory	The enterprise is characterized by a low level of payment discipline, accounts payable and financial risks. The company attracts the vast majority of short-term loan resources to ensure financing. There is a significant level of tax risks
0,00–0,25	0,41–0,6	Low	The company's activity is unprofitable, characterized by the high risk of insolvency and financial instability. There is a significant tax burden, tax policy requires serious changes

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Evaluation of the Exercise of the Performance Assessment System

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Abstract. Performance evaluation is a crucial instrument for evaluating the frameworks provided by any firm for its personnel. It is used to monitor individual efforts and performance against organisational objectives to highlight strengths and flaws for future improvements and to analyse if organisational goals are reached or act as the foundation for future planning and growth of the firm. The government would benefit from applying this evaluation method to police personnel. Since these law enforcements are obligated not merely to carry out their responsibilities but also to safeguard society from crime. Nonetheless, the practise of evaluating the work of police personnel has certain obstacles. The researcher has thus attempted to explain these difficulties. This research intended to evaluate the practise of performance evaluation at police stations in Dessie.

The study has generated important research issues on the key roles of performance assessment practise and the obstacles of appraisal in the workplace. To answer the questions, a descriptive research approach was used. Data was gathered using stratified sampling. The final responders were cops from the five police stations in the city. We have used both primary and secondary methods of data collection.

The survey participants have assessed the core mission of the performance appraisal practise of the police office, namely that the assessment criteria of performance are not connected to the professional atmosphere of the officer police, the assessment did not sense personal value, the government cannot attain its interests, no training is provided, and the appraisal practise is lengthy. Hence, the current approach of performance evaluation is ineffective. In conclusion, various remedies were given based on the results. Eventually, the researcher has recognised the most significant obstacles posed by the practise of performance evaluation in the workplace and suggested potential remedies. Suitable performance evaluation criteria should be developed, the evaluation should be connected to incentives, good Training should be offered, and assessment should be conducted in a timely manner.

Keywords: Performance Appraisal Practice (PAP) · Effectiveness of PAP · Dessie Police Office · Amhara Regional State Police Commission

1 Introduction

According to Harrington (1994) measuring something is essential for improvement. Without measurement, we can't understand anything whether it is correctly implemented or not. There are different mechanisms managers' can use in measuring the behaviours and practices of their employees to contribute to organizational success. Among these methods, evaluation of performance is the most prevalent and applicable in most organizations. Harrington (1994) elaborates on his idea by following saying: "Measurement is the first step that leads to control and eventually to improvement. If you can't measure something, you can't understand it. If you can't understand it, you can't control it. If you can't control it, you can't improve it." Atiomo (2000) defines performance appraisal as a technique that enables businesses to determine not that whatever level of performance is, but also in which categories such values must be improved to maximise the use of people management. As per Atiomo, in order for performance appraisals to be successful, every firm needs guarantee that each employee is informed of his duties and obligations. Appraisal of performance is an important undertaking in administration of human resources practise. In any organization, whether it is a profitable, non-profitable, charity organization or governmental organization, its human resource plays a critical role in organizational success. This is because it is the human factors that make decisions concerning all the other resources of the organization. As according Mathis and Jackson 2011, appraisals of performance are intended to evaluate a workers' effectiveness and give a forum for comments about past, present, and future performance objectives. Even though DeCenzo and Robbins (2010) explain, performance evaluations must express to workers how successfully they have met predetermined objectives. Consequently, any review of employee performance might be emotionally fraught. In accordance with this, companies' performance evaluation methods should be conducted with care. Appraisal of performance enables firms to tell workers about their development rates, competences, and potential. It helps workers to create their particular development objectives intentionally, hence fostering their personal progress (Sapra 2012). There is no doubt that a well-executed performance evaluation serves a crucial purpose in harmonising the demands of the person with those of the business (Cleveland et al. 1983; Conry and Kemper 1993; Grote 1996). Utilized effectively, performance assessment is an effective organisational tool for organising and coordinating the efforts of every employee toward the fulfilment of the organization's strategic objectives (Grote 2002; Lewis 1996). Grote notes that if performance evaluation is executed poorly, it may become a mockery. Essential to the efficacy of Human Resource Management, performance assessment assists businesses in rewarding and promoting strong workers and identifying poor performers for developmental programmes or other personnel actions. Since around 1990, there has been a growing emphasis on police performance across the globe, but notably in the United Kingdom (Collier 2006; van Sluis et al. 2007). (2008). In the United Kingdom, performance metrics were streamlined at the national level in 2007 to concentrate

almost exclusively on consumer confidence and trust, and there has been a recent trend toward regressing accountability for performance assessment as from federal to the reinforcement ratio (Barton and Barton 2011). The significance of performance evaluation for police personnel is indisputable. Officers of the law provide a service to society. Their projects are socially relevant. According to Gul (2013), police personnel collaborate alongside the cities they oversee to preserve order of law and stability, protect the community and their possessions, prevent criminality, reduce the apprehension of criminality, and enhance the quality of life for all residents. Performance assessment, as per Bayley (1996), is beyond just an intellectual challenge, a question of techniques and data. The way performance is assessed influences public's opinions about the police, as well as the nature of enforcement activities and the environment of management. Since performance evaluations determine objectives, incentives, and criteria, they are too crucial to be left to technologists. The measuring of performance should be seen as an inherent and continuing component of police management. The police officers are the ones who have guns legally. These police officers may misuse their guns intentionally or unintentionally. They may abuse their power for non-legal duties. Sometimes they are harmful. To minimize such kinds of risk, a continuous performance appraisal should be used to make sure they are carrying out their duties based on the law. The success of every firm is contingent on its human resource - its employees. Therefore, each organization's administration needs to be mindful of employee performance. To this end, organisations conduct periodic performance evaluations at a frequency decided by the organisation. Occasionally, certain businesses do the evaluation if it is required for scenarios such as elevation, relocation, wage increase, etc. Evaluation of police performance is thus essential to enhancing the quality of services provided to society. A formal performance evaluation system that is well-designed gives the capability to achieve these objectives. (Gul and O'Connell 2013). As per Mackenzie and Hamilton-Smith (2011), however, a discussion has evolved over the applicability of simple, user-friendly, numerical 'Modern Community Management'-style performance systems to the police context. Moreover, according to the knowledge of the researcher, there is no recorded study that has been conducted in the Dessie city police office department in particular to evaluate the practice of the system of performance assessment for police officers, the duration of the gap between two consecutive appraisals is short (15 days). Thus, Taking the problems with the aforementioned performance appraisal practice, the study tried to give answers to the following basic questions:

- How successful is the current method of performance evaluation at the Dessie municipal police department?
- Does the existing performance appraisal procedure measure police officers' performance?
- Does the evaluation criteria correspond to the working conditions of police officers?
- Do officers recognise the significance of performance review for their promotions, transfers, and compensation increases?
- Does the appraisal practice applied at the level the government seek?

To address the research questions, the accompanying hypotheses were created.

HO1: The Dessie municipal police department's current performance evaluation procedure successfully assesses officer efficiency.

HO2: The present performance evaluation process of the Dessie municipal police department corresponds to the officers' working environment.

HO3: The police officers of the city of Dessie think that performance review is crucial to their professions.

HO4: The present performance evaluation process of the Dessie municipal police department aligns with the priorities of the government.

The aim of the research has been to evaluate the practise of the performance evaluation system for police officers at the Dessie municipal police office.

Besides the previous basic purpose, the succeeding particular research objectives are initiated:

- To evaluate the efficacy of the present performance assessment procedure in the Dessie municipal police department.
- To examine whether the existing performance appraisal procedure measure police officers' performance
- To assess whether the measurement criterion matches the working condition of police officers.
- To assess the extent to which officers link performance appraisal with their future careers.
- To assess the government's criterion in the process of undertaking performance appraisal for police officers.

2 Methodology

Research Design: Design of research is the conceptual framework through which investigation is performed; it is the blueprint for data collection, measurement, and analysis. Since, this research aims to find and investigate the current practise of performance evaluation, it may be classified as a descriptive study. According to Kothari (2004), the principal purpose of descriptive research is to describe the current condition of circumstances. In this research project, the researchers have attempted to evaluate and explain the practise of performance evaluation inside the Dessie municipal police department.

Research Approach: In this study, The practise of performance evaluation at the Dessie municipal police department was evaluated through using qualitative and quantitative methods. The combination of both study methods resulted in a more accurate interpretation, since one may address facts that the other does not, and as a consequence, the analysis may provide an improved and unified outcome. As a consequence, both methodologies were used to determine the efficacy of this investigation.

Population: This study's population consists of police personnel employed at the five police stations under the Dessie municipal police office. These five police stations are now staffed by 317 policemen.

Sampling Methods and Techniques: The Dessie city police department comprises five stations. In this analysis, all five police stations were taken into account. This provides an improvement in the data's dependability and validity. Further; taking data from all five stations helped to get a good representation of the situation under consideration. The sampling method used in this study was proportional stratified sampling. Each police station represents a stratum within the framework of this study. Using basic random sampling, a representative sample was obtained from each stratum. Thus, the total sample size was established, and a proportionate number of persons were picked from each police station.

Sampling Frame: One of the considerations in sampling is the sample frame. For this study, the complete lists of officers serving in the five police stations were prepared from the data that were obtained from Dessie City Administration Police Office.

Sample Size Determination: According to the Dessie city police office, there are 317 police officers within the five stations. In estimating sample size for a limited population, the researcher uses the formula provided by Kothari (2004):

$$n = (z^2 \cdot p \cdot q \cdot N) / (e^2 (N-1) + z^2 \cdot p \cdot q) \quad (\text{Kothari 2004: 179}).$$

where N = size of the population.

n = size of the sample, z = as per the table of the area under a normal curve for the given confidence level, p = sample proportion, $q = 1 - p$;

e = acceptable error (the precision).

In the event when p is unknown, Kothari recommends using a value of 0.5 such that the sample size is maximised and the sample delivers at least the acceptable accuracy.

This study used a confidence level of 95% and a permissible error margin of 5%. Consequently, the following describes the sample size for this research study:

$$n = ((1.96)^2 \times 0.5 \times 0.5 \times 317) / ((0.05)^2 \times 316 + ((1.96)^2 \times 0.5 \times 0.5)) \approx 174$$

Consequently, 174 people comprised the study's sample size. Therefore, information was gathered from police personnel operating in the five police stations. The table below shows the distribution of officers among the five police stations.

Police Stations Population- One 65, Two 71, Three 68, Four 60, Five 53, Total 317 (Source, Dessie City Police Office).

Kothari (2004) states the following: "In stratified sampling, when calculating the number of items to be picked from each stratum, proportional allocation is often used to ensure that sample sizes are proportionate to stratum sizes. Specifically, if P_i denotes the proportion of the population contained in stratum I and n represents the entire sample size, then the number of items taken from stratum I equals $n \times P_i$." In accordance with this and determined by the number of officers in the preceding table, the number of police officers to be sampled from each station is estimated proportionately as follows:

The number of officers in Police station 1 = 65, therefore n_1 (the sample size from police station 1) is.

$$n_1 = 65/317 \times 174 \approx 36$$

The number of officers in Police station 2 = 71, therefore n_2 (the sample size from police station 2) is.

$$n_2 = 71/317 \times 174 \approx 39$$

The number of officers in Police station 3 = 68, therefore n_3 (the sample size from police station 3) is.

$$n_3 = 68/317 \times 174 \approx 37$$

The number of officers in Police station 4 = 60, therefore n_4 (the sample size from police station 4) is.

$$n_4 = 60/317 \times 174 \approx 33$$

The number of officers in Police station 5 = 53, therefore n_5 (the sample size from police station 5) is.

$$n_5 = 53/317 \times 174 \approx 29$$

The accompanying table provides a summary of the number of police station personnel involved in the research.

Police Stations Population Proportion Sample Size.

One 65 20.5% 36, Two 71 22.4% 39, Three 68 21.5% 37, Four 60 18.9% 33.

Five 53 16.7% 29, Total 317 100% 174.

Data Source and Collection Methods: This research included both primary and secondary data. Numerous secondary data sources, such as public performance evaluation reports and office papers, have been used. Open-ended and closed-ended questionnaires have been used to obtain the main data. To fulfil the specified research, the survey questionnaires have been employed. These surveys were drafted in English before being translated into Amharic, the local language. This was a crucial step to prevent uncertainties, hassles, and communication hurdles in the data collection process. In addition to that, HR officials were offered formal and semi-structured interviews.

Variables and Measurements: Independent (explanatory) variables are variables that describe one or more other variables, whereas dependent (explained) variables are variables that are explained by other variables (Kothari 2004). Consequently, "Effective Performance Appraisal Practice" was used as the dependent variable in this research. This dependent variable was hypothesised to be influenced or accounted for by four variables: "Perception of Operational Performance Appraisal Practice," "Conformance with Working Environment," "Perceived Individual Importance," and "Conformance with Government Interest." Consequently, these four variables were classified as independent research variables.

Data Processing and Analysis: Following the gathering of data, it must be processed and evaluated in accordance with the study plan's outlined procedure. This is necessary for a scientific investigation and for confirming that we contain all pertinent information for the comparisons and analyses we want to conduct (Kothari 2004). In a technical

sense, processing involves editing, coding, categorising, and tabulating acquired data so that they may be analysed (Kothari 2004). After the primary and secondary data were collected, they were edited and organized through the standardized procedure to make them suitable for analysis. Data analysis entails the technique of transforming raw data into information which is helpful for user decision-making. In order to respond to questions, test hypotheses, or refute ideas, data is gathered and examined (Judd et al. 1989). According to the author, descriptive and inferential statistics may be used to examine data. Additionally, the studied data may be presented utilising tables, charts, and graphs in addition to descriptive comments.

Descriptive Analysis: Descriptive statistical analysis are employed in order to characterise the fundamental characteristics of the study's data. They provide straightforward overviews of the sample and measurements. In conjunction with rudimentary graphical analysis, they provide the foundation of practically all quantitative data analysis (Judd et al. 1989). Using tabulation and measures of central tendency (mean and standard deviation) and measures of central tendency (mean and standard deviation), descriptive analysis was used to summarise the data (mean and standard deviation). In addition, several charts were employed to illustrate the data. The purpose of descriptive statistics has been to evaluate various elements. In addition, descriptive narratives have been examined concurrently with the interview questions as part of a contemporaneous triangulation technique.

Inferential Analysis: Using inferential statistics, we attempt to draw inferences that go beyond the immediate facts. In this study, the researcher employed inferential statistics to draw conclusions about more general situations based on our data. Specifically, the t-test and correlation analysis have been applied to sample data to determine the research population. One Sample T-test: A one-sample t-test analyses if the sample mean substantially deviates from a reported or declared mean (Cramer and Howitt 2004). In this research, one sample t-test was used to analyze whether police officer perception of the existing PAP is effective or not. Karl Pearson's Coefficient Correlation: The correlation coefficient is an index of the linear or straight-line relationship between two variables (Cramer and Howitt 2004). Correlation can be analyzed using various methods, among methods; Karl Pearson's coefficient of correlation is the most widely used (Kothari 2004). The coefficient of correlation (r) developed by Karl Pearson is also known as the product-moment correlation coefficient. r has a value between -1 and 1. Positive values of r demonstrate a positive association between the independent and dependent variables (i.e., changes in both variables occur in the domain of the statement), while negative values of ' r ' indicate a negative correlation, i.e., changes in both variables occur in the opposite direction. A value of zero for ' r ' demonstrates that there is no correlation between the factors (Kothari 2004). In this study, the strength and degree of the correlations between the dependent and independent variables were determined using Karl Pearson's coefficient of correlation.

Validity and Reliability: The extent to which a test assesses what it claims to measure is its validity (Creswell 2009). Hammersley (1987) said, "An account is genuine or truthful if it properly depicts the characteristics of the phenomenon that it is meant to

describe, explain, or theories.” In terms of validity, there are two primary concerns: if the measuring equipment are exact and whether they assess what is intended to be measured (Winter 2000). According to Ritchie and Lewis (2003), research validity is defined as the accuracy or accuracy of the study result. It is known the amount to which the results of this research may be duplicated if another study that employs the same research methodologies is conducted (Ritchie and Lewis 2003). It was affirmed that “the reliability of the findings depends on the likely recurrence of the original data and the way they are interpreted” (Ritchie and Lewis 2003). For making the research valid and reliable, the focus has been given to the following issues, Firstly; the questionnaire was distributed based on proportion i.e. equal chance was given to each police station police officer to obtain reliable and representative data. In addition to this, each police station’s heads and HR officers were interviewed. Besides, the secondary sources were gathered from the Dessie city police office. On the other hand, SPSS software has been used to minimize errors. Generally, the researcher used primary data by interviewing the office heads & HR officers and distributing questionnaires for police officers and secondary data from different published and unpublished documents.

3 Result Analysis

The majority of DCAPO respondents agreed that a police officer’s performance evaluation should include both personal characteristics and professional performance. Furthermore, successful evaluation techniques should include job-related information. Every six months, performance evaluations should be conducted. Self-assessment, the direct supervisor, and peers should assess the performance review. The research demonstrates that good evaluation systems should give consistent, dependable, and accurate information on job-related activities at stations. Forms, processes, delivery of techniques, rating, etc. should be standardised for a successful evaluation system. In addition, evaluation procedures must be feasible to administer, feasible to implement, and cost-effective for ongoing use. However, the interview findings indicate that the performance evaluation method is not cost-effective. One may infer from the research that successful performance assessment procedures must be practicable to administer, feasible to execute, and cost-efficient to be carried out continually. Honest conversations between the appraiser and the appraised is necessary for effective performance evaluation methods. Effective performance assessment processes should allow police officers to get proper constructive criticism, as well as the opportunity to clarify their disagreement with the criticism. The study’s findings indicate that the current approach of evaluating the performance of Dessie police officers is not fair nor reliable. This occurs as a result of the raters’ favouritism and partiality. This suggests that the current process of performance evaluation does not prioritise the office’s fundamental strengths. And it does not adequately explain to police personnel the performance evaluation criteria and essential capabilities. In Dessie city police stations, the present performance evaluation approach involves constant feedback. The raters lack appropriate skills and understanding regarding performance assessment methods, and they have not received professional education on the management, motivation, and evaluation of employee performance. The criteria used to

evaluate performance at the Dessie municipal police station are irrelevant for both the administration and the officers, and the reviewers are unmotivated during the evaluation periods. As per the results of the t-test, the Dessie municipal police department's current performance evaluation does not accurately evaluate officer performance. There are performance evaluation and ongoing supervision methods in place at police stations. The results of the research indicate that the performance evaluation criteria do not correspond to the police officers' working environment. The duration of the performance evaluation period is insufficient. In the practise of PAP, the organisational climate of the Dessie municipal police department is cooperative rather than competitive. Respondents are unaware of the raters' understanding of the peculiarities of police officer occupations. There is formal and regulated communication between a subordinate and supervisor. As per the t-test result, the present performance evaluation of the Dessie municipal police department does not appropriately reflect the officers' working environment. The existing method of performance evaluation does not encourage workers to establish objectives for improved performance. In addition, it has little correlation with benefits like as wage raises, bonuses, and/or promotions. Moreover, the assessment system does not assist officers in recognising their own weaknesses and areas for improvement; as a result, it is inadequate at identifying poor performers who may need counselling, demotion, termination, or pay cuts. The plurality of voters stated that the current performance evaluation process at the Dessie municipal police station did not result in future and continuing performance improvement for the police officers and the office. The achievement of performance goals and objectives has no direct beneficial impact on a Dessie municipal police officer. According to the results of the t-test, the majority of Dessie municipal police officers do not feel that performance review is essential for their professional prospects. The current performance evaluation method used by the Dessie municipal police station does not let police personnel to accomplish their tasks at the desired level, quality standards, and cost. Furthermore, it cannot identify the strengths and flaws of police personnel to enhance their future performance. The present performance evaluation method is ineffective in identifying the training requirements of Dessie municipal police personnel. The stations would not promote rewarding employees depending on their performance. The performance evaluation method did not allow the administration of Dessie police stations to make administrative choices based on concrete proof -based data. The procedure of performance evaluation at the Dessie police station is not transparent. According to the t-test result, the current performance evaluation methodology of the Dessie municipal police department does not align with official priorities.

4 Conclusion

Performance evaluation is a continuous practise of assessing employee performance. Performance appraisals are assessments of personnel performance and reliability; thus, performance appraisals are just one component of performance management. A successful performance assessment system should drive workers to perform better and generate more, allow managers to identify growth and training requirements, understand how they may develop and progress, boost employee morale, promote excellent

communication between the personnel and the employee, and identify bad performers and assist them in getting back on track. Effective performance evaluation systems are dependable and valid, have work relevance, uniformity, practical feasibility, transparent interaction, provisions relating to findings, and adhere to formal protocols. This research evaluates the implementation of the performance evaluation system for Dessie municipal police personnel. The research also analyses the efficacy of the current practise of performance evaluation, the compatibility of evaluation criteria with the professional atmosphere of law enforcement officers, the significance of evaluation for police officer careers, and the consideration of the government. This research included both primary and secondary data. The major information was collected through surveys and interviews. The questionnaire was designed for police officers, whereas the interview was designed for DCAPO department chiefs and HR department directors. In addition, secondary data were collected from public performance evaluation outcomes, performance evaluation guidelines, office proclamations, and papers. According to the secondary data and question and answer session replies, the Dessie City Administration Police Agency is an office that is in order. The office is divided into four basic processes: society-based crime deterrence, criminal investigation, road traffic safety assurance, and human resource management. There are five police stations underneath the police office. These police stations serve distinct neighbourhoods of the city. Since this community has a huge population, the DCAPO structure is functionally organised. The most of participants in Dessie City Administration Police Stations stated that performance evaluation processes should evaluate both work performance and personality qualities. The interview also revealed that each police station evaluates the work performance and personal characteristics of its personnel. This is because police officers are disciplined and possess other admirable attributes.

The majority of those surveyed (about 41%) believe performance evaluations should be conducted every six months, while between 21 and 20% believe they should be conducted quarterly and every fortnight, respectively. About 14% and 5% of respondents believe it should be performed monthly and annually. In addition, secondary data reveal that performance evaluations are conducted every fifteen days. According to the responders, there is insufficient time to complete the project. Furthermore, based on the study's results, the most of the survey participants said that the current performance assessment process of the Dessie city police department did not accurately evaluate the performance of officers. The final responders assessed the efficacy of the office's performance evaluation procedure as ineffective. There is favouritism and prejudice of reviewers in the current performance appraisal practise, and reviewers did not receive education or experience on the management procedure. Therefore, it can be argued that the current process of performance evaluation for Dessie municipal police officers is ineffective. In contrast, the current practise of performance appraisal involves continual feedback. It may have a favourable impact on the practise of performance evaluation inside the Dessie police department. In addition, based on the responses of the top police officers, it has been determined that the current performance evaluation of the Dessie municipal police station does not adequately represent the officers' working environment. Their rationale was that the performance evaluation standards did not reflect the police officers' working environment. For example, the criteria of performance assessment are developed based

on civil servants; as a result, it is difficult for a police officer to execute the criterion based on the police officer employment environment, and the evaluation period of the performance appraisal (every 15 days) is not permissible because it does not provide sufficient time to begin and complete a task. This also suggests that the present performance evaluation of the Dessie municipal police department does not correspond to the officers' working environment. Even though the preceding obstacles have a negative influence on the effectiveness of the PAP in the workplace, the following difficulties have a beneficial impact. There are continuous supervision practises tied to performance appraisal, and there is formal and structured interaction between a subordinate and supervisor. The organisational employment situation of the Dessie city police department is cooperative, as opposed to competitive, in the practise of performance evaluation. In addition, based on study's results, police officers do not feel performance review is essential for their future employment. Their main motives are that the present performance evaluation method discourages workers to establish objectives for improved performance and that it lacks ties to incentives such as salary raises, bonuses, and/or promotions. Furthermore, as per the interview results, not only did performance assessment findings weigh promotion, but it may also be a condition for career advancement or other professional opportunities., it does not bring future and continuous improved performance, completion of performance aims and reasons has no immediate positive impact on a police officer, and it is unsuccessful in detecting underperforming employees. Who may necessitate some kind of counselling, demotion, or dismissal. This also suggests that police personnel do not value performance assessment for their future jobs. The Dessie municipal police department's current performance evaluation procedure does not align with government interests. The reason for this is because the present performance assessment method employed by Dessie city police station does not allow police officers to properly execute their tasks by the desired level, quality standards, time and cost, it might not recognise police officers' weaknesses and strengths to enhance their future performance, it is ineffective in assisting to identify training requirements, It does not do business in such a way that awards are provided on the basis of outcomes, and it is ineffective in recognizing training needs. Furthermore, the replies to the open-ended questions revealed that the findings were influenced by racism, distinctive approaches, friendship, and other such characteristics. As a consequence of the government's level of participation, the PAP did not allow the Dessie police station's management to make fact-based administrative decisions. As per their reaction, if the government requires a successful performance evaluation procedure, it must concentrate on the impression of performance appraisal among police officers. According to the analysis and conclusions of the research, the organisation structure of the Dessie city police office is functionally structured, but the office is ineffective in conducting the core performance evaluation practise owing to the police officer's issues and obstacles.

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The Effects of Cyber Crime on E-Banking

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Abstract. This research paper is intended to raise awareness of cybercrime on our daily transaction. In the introduction we will state brief issues that occurs during these threats and how it effects banks and other monetary firms. Lastly, we will give a few briefs on important definitions of Phishing, Malware and other sorts of risky viruses. In the body we will go more into details. Firstly, we will state the ordeals of banking sector during these threats. We will explain the use of online services and how it may have risk services. A detailed methodology will be conducted on the use of artificial intelligence in the banking industry and how it may mitigate internal risks. We will explain these vigilances of Identity Theft and what harm it can cause to an individual use and even and in an industry perspective. We will go more into details in the process of Phishing on how to be aware and to avoid these threats. Case studies will be conducted with the support of the United States Federal State laws. The jury and prosecutions that have happened mentioned in detail below. Lastly in the body we will explain how we can take safety measures in avoiding these threats and how to report when it does occur to act. Lastly a brief summary will be giving a prompt explanation for the goal of this research paper.

Keywords: Cyber crime · Finance · Banking

1 Introduction

In the growing high-tech industry of the online world, how safe are we really, and are we secure enough? Considering the amount of tech, we use in our daily lives from computers to mobiles or tablets; are we using it safely guarded alone, or is there a non-physical criminal lurking behind our screens? In the 21st century financial entities are undergoing an elevated risk of cyber threats that is losing the integrity of the firms. During these past years, reports showed a rapid growth in victims that went under the vigilance of cybercriminals. Many victims have been robbed with their credit card information being stolen under online Phishing, malware, social networks, etc. (M. 2022).

These criminals tend to use identity theft for their own personal needs. Which of these needs can be opening a store, stealing from the daily transactions, getting a loan, and many more! Considering today's statistics, these criminals come from many countries

that are under poor consent. Some of these high rated countries to be stated are mostly from Morocco, parts of Eastern Europe like Bulgaria or Armenia, and some from parts of East Asia (M. 2022).

For example, let us take one case study that was conducted by the Chief Security Officer (CSO) Magazine in cooperation of the U.S. Secret and Computer readiness team. The case showed statistics in 2004 had an estimate cost of \$666 Million cyber-attacks than it was proclaimed back in 2003. The ancillary losses were due to identity and property theft. All losses bulged and exceeding the figure of \$ 47 Billion. The advent hood of lose showed the relines of many business companies on using the internet as the go through tool of marketing and sales, fast high-speed communication networks, and the encouragement of remote services between the employee and the costumer or vice versa. (F.A. 2022)

The Federal Bureau of Investigation (FBI) has established a group called the Crime Complaint Center (IC), to handle another problem called Identity Theft. Another study case accounted by Unisys, victims of Identity theft were more of the age group of below 34 which showed the 30 percent, the High-class commodity of the 27 percent that have an annual gross of \$75,00 plus, college educators of the 28 percent and lastly metropolitan residuals at 21 percent. (F.A. 2022)

One of the commonly used tactics is called online phishing. The perpetrator cons the victim by the usage of spoofing. Spoofing is a sub tactic in phishing that mimics a legitimate corporate or government-based e-mail, website, or any type of communication to the recipient in giving out any confidential information. The information can include credit card password or whole identity theft. This crime is more conveyed of being fraud. Where now a days more banks have created a specialized department just for bringing out FRAUD (F.A. 2022).

The common type of Malware virus is the Trojan Horse. It is based on the roman methodology of when an attack procures an entering gift. What it means is that criminals tend to use links of foreign entities purveying the recipient to click on it. Thus, causing harm in a virus attack that steals information and shuts down the electronic host. Where the recipient has no control of it whatsoever. Many large corporations such as nuclear plants were shut down due to one click. This based method was once used as a beneficial practice of ethical hacking. Although not all use it as good conduct. Technology is immersive within the cyber community between using ethics and not using morals.

Protection strategies are being adopted specially by banks. These methods are set to implement procedure and practices to monitor critical information and technology assets in a cost-effective manner. Banks can implement prevention tactics that will throw away any threats. Some of these prevention ways are firewalls, anti-spy ware procedures, and intrusion detection systems (F.A. 2022).

One of the best assessment methods done is called RISK ASSESSMENT, it has a more effective cost on analyzing and tracking the issue. This means that the entity is willing to prioritize the threat in a manner where the cost will have a less down-effect on the company. This strategic method helps recover a company's losses evidently (F.A. 2022).

2 Banks and Their Ordeal with Cyber Security

In 2016 a survey showed that cybercrime has cost the economy globally an enormous amount of \$450 Billion with the Asiatic Organizations that hold accountability ranging to more than \$81 Billion. More than 70% of CEO of banks and the Capital market hold accountable the damage of cyber threats to their developments. Security breached incidents have impacted financial service firms more majorly than of those compared to the business in various other industries (Sony 2022).

It is said that financial firms are more likely to be targeted of cyber-attacks by 33 percent. The development of security defense programs is a key role that each firm plays to enhance an efficient working environment. In the past years, reports of ransom attacks have been impacting financial firms. Approximately \$360 billion (about \$1,100 per person in the US) damaged the global banking industry last year (Sony 2022).

Advanced security automation analyzes sufficiently as integration and diverse product can identify the profile key advantages. Security engineers can identify these issues in a good response duration even with scarce resources that are involved in the enhancement of productivity. With innovative research, humans can develop artificial intelligence. These developments are able identify and encounter any evolving threat inside the cyber network. Especially in banks, the egger concentration in cybercrime is highly prioritized. Now a days bank firms increase in unlimited budget for mitigating cyberthreats because they know the great risks that is caused by (Sony 2022).

2.1 What are Online Services?

In a rapidly growing world, online services have become an added feature in the banking industry. It gives the benefits to consumers to conduct online transactions on secure websites or mobile phone applications at ease without any physical attendance. Online banking gives the full related cash flow summary of money transfer, cash deposit, cash withdrawal of individual use or even a whole corporation in just one easy step of a click. With the fast providences of easy Internet access these days, one can keep a consistent log of one's daily financial life (Sony 2022).

In corporate business some mandatory office supplies have been eliminated with the ease of online banking. In addition to this it has given a good gross balance due to cutting unnecessary costs. All this information sounds good, although there is always a dark side to any effective use. Security has always been the main obstacle that some financial own entities always oversee to overcome. In many cases and rapid growth of technology, immoral use of online hacking skill gives the vulnerability of users to be victimized of identity theft (Sony 2022).

3 The Advantages and Advantages of Using Artificial Intelligence in the Banking Industry!

So Artificial Intelligence now a days is contributing to our daily lives. Although when it comes to banks what are the benefits? Customers' data can be easily tracked bases on his or her expense. A full budgeting plan can be evaluated and based for the customer

due to past present and future. To give a better understanding of a customer's behavior and needs, AI (Artificial Intelligence) helps to track related resources of data that will enhance the customer's experience better (Sony 2022).

AI can play a significant role in Fraud. Abundant financial service providers are involved in the involvement of artificial intelligence and engineered learning solutions to identify fraud in real-time. The popularity of 24/7 access to banking transactions plays a major vital role in our daily lives. For example, the banking company of benefit from the Kingdom of Bahrain, it became the main leading online monetary transactions in the country. People are commuting to their services daily. Even a small transaction with a minimum of \$0.01 can be made (Sony 2022).

Now let us look more into the disadvantages. Maintenance and conduction of Artificial Intelligence is a major investment. This makes it very costly for the banking sector to provide. As Software is always an immersed topic, updates will be needed depending on the needs. AI cannot always make good judgement. With enhanced techniques, it can only learn and improve. With the role of employment depending on the state, it can have a negative impact. In a state where already employment rate is already down, it can cause more harm where it can dehumanize a whole sector (Sony 2022).

3.1 What is Identity Theft?

Identity theft happens when the criminal conveys the victim's total confidential information to access financial accounts. These criminals tend to use two common ways, which are phishing and pharming. Phishing links that bait the recipient through bulk e-mails tend to steal all personal information. It can be personal address, credit card details, or identification information. The other way, which is pharming, cast a grouped link which can be shared through online commercials or proclaimed online surveys that tricks the grouped recipients to go and click. These days more tactics are enhanced to make it harder to catch (Ug 99).

Reports done by the United States Postal Service, the Federal Bureau of Investigation, the Office of the Inspector General, and the National Crime Prevention Council showed that the highest crime rate falls under Identity Theft. Due to multiple investigations, the reports showed that these perpetrators were able to open bank accounts, make loans, rent, or buy houses and apartments all on the behalf of the individuals names (Ug 99).

Many individuals and businesses were open to identity theft due to the disclosure of many levels in the personal information given to immersed sights. Just think about it! In today's online transactions any online purchase or online transaction, they all require personal information. Hackers are given ease of information due to our reliance on online support. It means that they are given the ease of tracking down any personal information (Ug 99).

One huge cost of identity theft is the loss of customer trust in a financial firm. When a customer goes through Identity Theft, he or she will not be client on their services and more. So, this will *have* a major impact on the firm which will create major crucial economic loss. According to Edward McNicholas, a partner in the law firm Sidley Austin, "if you experience a security breach [of customers' personal information], 20% of your affected customer base will no longer do business with you, 40% will consider ending the relationship, and 5% will be hiring lawyers!" (Friedenberg 2006) (Ug 99).

3.2 Process of Phishing

As stated above, phishing is the process of initiating bulk e-mails to the recipient in persuading them to give out personal information. Spam emails that sell products are less insidious than phishing emails. Twenty-nine point five days is the average time for spammers to target e-mails. On the other hand, identity thieves process the responses of the recipient just merely within 14 hours of the incitation (Ug 99).

Lures are cast out into cyberspace by phishing e-mails to bait the vulnerable. For example, the sender can mask a trusted business firm as of a trusted bank sending out millions of e-mails. Due to their trust, they will comply as customers. Some identity criminals tend to use big name companies such as Apple, Amazon, E-Bay, PayPal, etc., which globally are known for high security and high-level revenue. Even with those big names who are less steamily relevant to fall under the category of phishing, yet a security breach could happen! (Ug, 99).

Another sub-category of phishing is called Spoofed websites. They are fraudulent web-based sites that entice the consumer to reveal their personal information. One way is the recipient receives a phishing e-mail that tricks the recipient into a persuasive argument that leads to a serious matter. Which the matter is obviously fake. To rectify the proposed issue, a private link that mimics an official banks site is sent to verify all the personal information to be leaked. The criminal or in other words the phisher can tend to use the stole credentials and passwords to empty the whole bank account (Ug 99).

Another dilemma is where the phisher can profit out of the crime is to sell the stolen information out in the dark web. The dark web is where high profile hackers tend to sell illegal products or services where no physical monetary is required. These web sites tend to be run on computers that are still connected from the era of the Soviet Union. In the dark cyber space high profile traders earn titles, reputations, and ratings all from the stolen goods. There are actual malicious-code writers who provide phishers with a binding contract to generate sophisticated spam e-mails in the chance of gaining shared revenue (Ug 99).

Another lethal version of phishing is called spear-phishing. This so-called hybrid version has raised large alerts and alarms to the cyber world of vigilance.

This version is used to target high profile individuals. It is much to say that it is extremely hard to detect and track down. The messages that are sent seem to mimic a well-known organization but with a twist. It targets both parties of the sender and the receiver that have a trust bonding relationship. It means that it fakes it out of being a trustworthy communication. This version is organized by highly organized groups mostly seeking financial gains, trading secrets, or even seeking highly confidential military secrets (Ug 99).

4 Pharming

A more sophisticated version of phishing is called pharming. It is said that it uses high-tech based malware where the perpetrator installs it into the computer secretly. This process lures its pray into a fake website. Thus, perpetrating the victim into his written bank information and Stelling it. As mentioned, this type of mimicry is different and

more dangerous. For it hosts a fraudulent site which deceives the victim but is on a domain where the dark web is lurked (Ug 99).

One of the risks of the vigilance is that all it takes is to just open the pharmer's e-mail for causing immense damage. When the victim is about to open it, a stealth application redirects him or her to the fraudulent website.

The major downside of it is when the users tend to unintentionally download the malicious program even without cowing a click or viewing an attachment (Ug 99).

Another way a virus can attack is by using key logger though MSN (Microsoft Messenger). This type of virus uses a tracking log called keystrokes. It is when the criminal hacks and tracks user's credentials through legitimate websites. Users who tend to use the same credentials of profiles and passwords on various platforms are more vulnerable to this type of attack (Ug 99).

Spelling mistakes, does that sound any familiar in computer language? Throughout the years of studying computer, any simple spelling mistake could cause major harm! This is how pharmers tend to take advantage to build domain names. To put in means, pharmers construct a website based on a missing simple mistake in the domain address. This is how they trick the victims into believing the legitimacy of the site (Ug 99).

What is (**DNS (Domain Name System)**)? It stands for Domain Name Server, considers to be server poisoning. It converts the web address into internet protocol address and routes the computer to the correct location. To illustrate it, once a URL is typed into the web-browser, the DNS server is accessed to retrieve a numeric IP address that corresponds to the URL. Thus, it will request it to display the desired web page. Local servers operated by Internet Service Provider (ISP) are the ones targeted by pharmers (Ug 99).

4.1 Malware Vigilance

Most significant type of threat caused is due to Malware. It can come in viruses, worms, trojan horses, and other threats. This is utilized by criminals to get access to unauthorized accounts to gain financial data, and other sensitive confidential information. The evolution of malicious software is due to the ever-rapid growth of development of mobile phones. Perpetration of computer fraud is supported by malicious applications that draw an enormous amount of money from business sectors. One software platform that is currently being targeted is Android. This is due to the amount of low security measures that are enhanced with into the platform. Although many computer engineers find their way to use sophisticated built-in protection, hackers still find a way to penetrate it. Defense mechanisms are still under great process to protect targeted online banking services and other online financial firms (M. 2022).

5 Lottery Fraud Scams

Everyone would like to win the lottery and become instantly famous. Although not everything that seems is always real! In India, one of the highest frauds that has happening is called Lottery Fraud. These fraudsters will tend to call you or send you fake messages stating that you have won the Lottery. Then you will be asked to transfer your payment

online in the taxed name. The other option is you will be asked to make your payment by visiting a fake website. When your payment is done, all your credit card details be stolen. These crimes tend to happen in countries where the unwary are targeted. (Patel 2022)

6 Social Networks

The most common platform available for fraudsters are social networks. It gives them easy access to the information of the account holders. When information is gained it gives them unauthorized access for theft use. Some main social networks are Instagram, Facebook, Twitter etc. When the perpetrator tries to send a private message faking of something not being, which is a link. By clicking on it, the victim is redirected to a trapped website. This can lead to many things, it can be malware, or even stealing whole information. As personal experience, when I open my Instagram account, I tend to get fake direct messages that proclaims to be about Bitcoin or NFT. Where in today's age it is considered as a trending topic to attract consumers in gaining instant money. Cybercrimes tend to change is evolve due to time and trend. (M. 2022)

6.1 Case Studies

In the following paragraphs. We are going to do various case studies about the effects of cybercrime on bank firms.

I. Case Study: Pisciotta Versus Old National Bancorp

The case was argued and filed in the United States of America on May 21st, 2007. Luciano and Daniel Mills, filed a complaint to court representing as the victims on behalf of the customer and future customer of Old National Bancorp. They accused Bancorp. in obtaining personal information through applications for banking services, which they failed to secure. This resulted in a hacker stealing information of all ONB customers (Bancorp 2022).

The hacker was able to utilize the stolen credit card information and make transactions. As a result, the court closed the case by finding ONB guilty, and wanted to pay a sum of \$5 Million in damages, because the corporation did not meet high security standards. This cost the corporation so much that it was about to go bankrupt (Bancorp 2022).

II. Case Study: Plaintiffs Marsha and Michael versus Defendant Citizens Financial Banks.

The case was filed in the United States Illinois.

In American court language plaintiff is the entity who files the argue against.

The defendant is the entity who is accused by.

Citizens Financial Bank (The defendants) is an insured saving bank that is federally stated. It has branches located in Chicago and Northwest Indiana. The Plaintiffs Michael

and Marsha were regular customers of the defendant. Tell them when they have fallen victims of identity theft. An unknown hacker gained access to their online account and stole from their equity approximately \$26,500. The Citizens bank reported their account as criminal to the National Credit Bureaus and threatened to evict them from their residence, when they claimed that they were unable to pay off the loss (Bank 2022).

After further investigation, reports were made that the hacker was able to make various transactions. He was able to buy and sell products based on credit card information. Allegedly due to the defendants having somewhat of security measures, the court ended the case with fairness. The court closed the case of the defendants pleading guilty to some parts only. As mentioned above security is a costly matter, investments and updates must be made to avoid these cases (Bank 2022).

III. Case Study: Jonathan B Nates on Behalf of the Alleged Victims Versus Care First inc.

The Case was File in the United States, District of Columbia

Care First Inc. is an insurance company that serves an approximate of one million customers in Maryland, Columbia. In 2014, it suffered a major cyber-attack. This attack has leaked confidential information of its customer to pharmerms. The intruders were able to enter 21 computers of the company, which they were able to reach their database. The company did not discover this until a year later. Although as the company was just storing only address holds, surnames the court dismissed the case due to no monetary injury caused (Attias 2022).

How to be Aware and Adopt Security Measures

There are many techniques that online banking should know to prevent any cyber-attack and secure their data. When a user provides his or her information to platform research must be done. Online banking users should learn how to encrypt their personal data, for example banks and returned tax. The usage of strong passwords is always recommended. There are multiple ways a fraud criminal could use to crack down profile and accounts. Your password is recommended not to be written down anywhere. Strong passwords should include capitalized alphabets and numerical figures (M. 2022).

Try to stay more secure when you are online. Keeping your profile private will be least likely to be vulnerable to cyber threats. Never open questionable links and e-mails from unknown sources. Try to upgrade your system and software more often to avoid any security breaches. When in doubt of a foreign number specially outsourced calls, never pick up! (M. 2022).

7 Conclusion

In today's lives as humans we tend to rely more on our enhancements of electronics than the physical world. Our mobiles, tablets, computers etc. have given us the ease of making our online transaction commodities at our comfort. Stating again that every benefit of use always comes consequences. Not everyone tends to have their morals placed within this sector of banking. People are always at risk of theft behind the eyes of their screens (M. 2022).

We have showed statistics of how badly banks can get harmed under cyber threats of financial banking. One survey that was conducted in 2016, a global economy lost more than 450 billion in revenue due to financial harm. CEO of banks and the capital market are held accountable for their cyber threats in developments (Sony 2022).

We have talked about the benefits of online services. Which tends to play a leading role in our daily lives and in the banking industry. It gives us the opportunity to make our daily transactions in our own households. All our cash flow in money transfers, cash deposit, and cash withdrawal can be done in one click (Sony 2022).

Artificial Intelligence has contributed to many sectors of the world. Especially in the banking sector it tends to have a major impact. The advantage is that it gives customers ease in data tracking of expenses. Budgeting plans can be evaluated. It even enhances the customer experience. The other disadvantages are the drawbacks of fraud or hacking into the systems which damages a financial firm (Sony 2022).

In this report we have talked about the damage what can be caused when identity theft occurs. It is when the victims get robbed by his or her personal information. Which can be credit card or bank account information. The criminal tends to use the two most common ways, which are phishing and pharming. Where both are two dangerous tactics of luring their pray (Ug 99).

Phishing is the process of initiating bulk e-mails to the recipient in persuading them to give out personal information. Spam emails that sell products are less insidious than phishing emails. Twenty-nine point five days is the average time for spammers to target e-mails. On the other hand, identity thieves process the responses of the recipient just merely within 14 h of the incitation (Ug 99).

Pharming uses high-tech based malware where the perpetrator installs it into the computer secretly. This process lures its pray into a fake website. Thus, perpetrating the victim into his written bank information and Stelling it (Ug 99).

We have stated many other cases of how Cyber Threat can cause damage to an indivial and a firm. Lastly, we should stop and prevent these cases from happening in many ways. This method can be complex passwords, not to click on unknown sites, and not to accept malicious emails.

Resources:

Number	Initials	Link
1	(M., 2022)	Bhasin, M. (n.d.). <i>The role of technology in combatting ...</i> - <i>researchgate.net</i> . Retrieved April 19, 2022, from https://www.researchgate.net/profile/Madan-Bhasin/publication/306030925_THE_ROLE_OF_TECHNOLOGY_IN_COMBATTING_BANK_FRAUDS_PERSPECTIVES_AND_PROSPECTS/links/57ab42a008ae7a6420bf6bb7/THE-ROLE-OF-TECHNOLOGY-IN-COMBATTING-BANK-FRAUDS-PERSPECTIVES-AND-PROSPECTS.pdf
3	(F.A., 2022)	F. A. (2022, October 23). The effects of cyber threats on customer's ... - IJEEEE. Retrieved from
3	(Riaz, 2022)	https://www.researchgate.net/profile/Adnan-Riaz-3/publication/280295982_Consumer_Acceptance_of_Online_Banking/links/55afee5008aeb0ab46698264/Consumer-Acceptance-of-Online-Banking.pdf
4	(Brody, 2022)	http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.97.6078&rep=rep1&type
5	(sony, 2022)	https://d1wqtxs1xzle7.cloudfront.net/63947012/1020200717-18417-d6nki8-with-cover-page-v2.pdf?Expires=1650588869&Signature=C-oCkPfiKpUBv39NXffEBwvcgLoqliYGgUopLboNsHAPZdl3jI0~JdfYdXODIC2yxks66vsKykiy1qodfwwAQuW-WbvHEmlUhj~A0Jxm054b9CMYFQyQ8CYoWTzILZUxG5qMTgToQ6UsGHEdh0bOq7RKFuMPvUbmBMHafd-nMuIwbe1B48NyN2I3ZFEMO2REUpllasBIcQNXAszEn2HyaKiq8ltd17qKIYfzx7S4wCCnidilWHJrJpD1gKps1FcpEdGeQ4dJqfFlwGTgRYBVbNSLFv0BBbhmzFbLR9VrdLSQT8y-iIO-R33nOZpaTBqMDA0caXKC4c0iZNktt6yg__&Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA
6	(Patel, 2022)	https://www.researchgate.net/profile/Dhaval-Chudasama/publication/350486308_Research_on_Cybercrime_and_its_Policing/links/6062dd00a6fdccbfea15e1d9/Research-on-Cybercrime-and-its-Policing.pdf
7	(Bancorp, 2022)	https://scholar.google.com/scholar_case?case=7494892983948505409&q=cyber+threats+on+online+banking&hl=en&as_sdt=2006
8	(Bank, 2022)	https://scholar.google.com/scholar_case?case=5961156591784949847&q=cyber+threats+on+online+banking&hl=en&as_sdt=2006
9	(Attias, 2022)	https://scholar.google.com/scholar_case?case=17374636937188622312&q=online+identity+theft+victim&hl=en&as_sdt=2006



Risk and Return Analysis of Crypto Currencies in India

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Abstract. The term Cryptocurrency, also referred to as crypto-currency or crypto, is the currency that is digital in nature and traded virtually in a secure manner.

Although there is no regulatory body to monitor the issue or regulation of the digital asserts, they have been making the news of late and have captured the hearts of the investors. In recent days, Crypto currencies are the major players in the Coin Market. Today everyone investing in Crypto currencies and they analyses that the Crypto market is efficient or not. This study is based on the Crypto Currencies Market. In this study we used Descriptive statistics, Correlation Matrix test and GARCH Model for the period of 1st Jan, 2015 to 31st Dec, 2021. The study concludes that Crypto currencies in India are highly volatile and traders can able to forecast both Risk and Return in future.

Keywords: Cryptocurrency · Correlation · Descriptive statistics · GARCH · Risk and return

1 Introduction

Cryptocurrency, also universally termed as crypto is a system of digitalized payment system that does not depend on banks for its transactions. It is a peer-to-peer system which facilitates the receipts and payments from anywhere around the world. They exist solely in digital form and pave its way virtually.

A remarkable financial reforms have been emerged in the past few years due to growing number of online transactions. The Finance Minister stated that currently Crypto currencies are unregulated in India. “Reserve Bank of India does not issue Cryptocurrency. Traditional paper currency is a legal tender and is issued by RBI in terms of provision of RBI Act 1994. A digital version of traditional paper currency is called Central Bank Digital Currency (CBDC)”.¹ Minister also replied that ‘RBI is on the job for working out an implementation strategy for introduction of CBDC and also looking at implementation with hassle free solution”.

Three terminologies, Block chain, Decentralization and Cryptography need to be understood. It is digital money that is decentralized in nature and is based on block

¹ Rajyasabha Proceeding, March 14, 2022.

chain technology secured by cryptography. With the help of cryptography, data is being secured from unauthorized access. The personal private keys of the participants are assigned to the transactions in a network. If there is alteration in a record, the signature then becomes invalid and the information is passed on to the peer network. Further damage can be prevented by early notification. Maximum claims that block chain makes like privacy and immutability are enabled the cryptography.

Despite getting banned from few nations, crypto currency is spreading in every part of the world. Insight survey revealed that the western region of India like Mumbai and Pune has the highest number of investors for popular Cryptocurrency.

Present research explores the risk and return aspects of crypto currency attempting to answer the important question that ‘Whether crypto currency be the next currency platform’? As the fame is high for crypto currency throughout the world.

2 Literature Review

In a study made by Peter D. DeVries (2016), on ‘An Analysis of Cryptocurrency, Bitcoin, and the Future’, the study revealed the growth of the digital currency market and the future prospects of the same and concluded that the Bitcoins are here to stay and that a niche market is being carved out, which may lead crypto currency into the mainstream; Crypto currencies were set to revolutionize the trade markets, illuminating a shift in economic paradigms.

Aleksander Berensten and Fabian Schär (2018) made a study on ‘A Short Introduction to the World of Crypto currency, that The Bitcoin creators’ also felt that the Bitcoins led to a decentralized cash-like electronic payment system. However, there existed certain challenges and obstacles due to the price volatility which could pose a threat in future for the investors ad users of digital currencies.

A recent study titled “Bitcoin and Cryptocurrency: Challenges, Opportunities and Future Works”, was done by Muhammad Ashraf Fauzi et al. (2020), and the study revealed that the crypto currencies would become more popular and widely used due to certain advantages including- security aspects, low transaction cost and higher returns on investments. The study also highlighted certain flaws such as laws and regulations surrounding the crypto currencies and the possibility of a crash and bubble, as well as attacks on network and the like.

Rejeb, A et al. (2021), in the study ‘Crypto currency in Modern Finance: a Literature Review’, focused on the challenges of crypto currency in modern business which include the lack of regulatory framework, criminal activities and frauds, higher energy costs, possible bans on the usage, privacy issues and in particular the high volatility of the risk and return tradeoff.

Fan Fang (2022) had conducted a study on ‘Cryptocurrency trading: a comprehensive Survey’, and the study provided a comprehensive and detailed survey report of Crypto currencies, the risk and return factors, construction of a portfolio of assets involving Crypto currencies and technical hiccups. Moreover, the study also provides an analysis of volatility trends, risk and return analysis and opportunities available in trading in Crypto currencies.

In a study conducted by Klaus Grobys and Niranjan Sapkota (2019), on 'Crypto currencies and Momentum', the researcher investigated into the existence of momentum effects while dealing with Crypto currencies. The findings of the study reveal that there is no evidence found on the significant momentum payoffs with relation to the cryptocurrency market and the study also highlighted that the Crypto currencies were found to be more efficient than the traditional and tradeable assets existing in the market.

Paul Delfabbro et al. (2021), conducted a study on cryptocurrency trading and their risk factors and found similarities between the online sports betting and day trading. The similarities cited were a round the clock trading availability, globalized nature, and social media effects and price movements. The respondents had tremendous faith in the advent and wide usage of Crypto currencies in future although the volatility of the instruments posed a severe challenge.

Ingolf G. A. Pernice and Brett Scott (2020), studied the monetary role of Crypto currencies and the evolution of the Bitcoins in the market. The Crypto currencies were to be made a centralized system of payments and the trust factor of the persons dealing with the crypto currencies were to be restored.

In a study made by Saman Adhami et al. (2018), on 'Why do businesses go crypto?' found out that the probability of ICO's success is high as it brought in more profits. Initial Coin Offerings (ICOs) allowed companies to raise capital through crypto currencies. Doubts were raised on the investor protection especially from frauds as well as speculation bubbles and other illegal practices through crypto currencies. The study concluded that despite the challenges, crypto currencies were set to rule the markets in future.

Jakub Bartos (2015), attempted a study on 'Does Bitcoin follow the Hypothesis of Efficient Market?' and found that the prices of crypto currencies are highly volatile and it is not possible to have a perfect knowledge on the price movement unless one possessed insider information and also a great deal of luck. Although the respondents are of the view that the crypto currencies should replace the paper currency yet they were unable to state with certainty and that the efficient markets could be a big challenge with Crypto currencies.

Aaron W. Baur et al. (2015), attempted to study whether the Bitcoins posed a challenge and would end up causing Disruption. The study revealed that the respondents expressed their confidence in Bitcoins and felt that the future of Bitcoins was very bright and it would dominate the market. The respondents expressed their interest in having Bitcoins to replace the traditional system of dealings.

Fauzi, Muhammad Ashraf et al. (2020) made a study on Challenges, Opportunities and Future Works of Bitcoin and Cryptocurrency: in order to understand the challenges and difficulties faced by the investors while investing in Crypto currencies. It was found that the awareness levels of the investors are low and therefore the confidence levels of the people also seemed to be low. People did feel that the digital currencies though would be certainly replaced by the traditional paper currencies and they looked forward to trading with crypto currencies on having more clarity on the same.

Zdenek Smutny et al. (2021), in his study on "Motivations, Barriers and Risk-Taking" investigates into the factors affecting the motivational levels and also the barriers existing in the minds of the investors for risk taking and uncertainty. Lack of information

was considered to be one of the biggest barriers for investments in digital assets. The experiences of the investors with regard to crypto currencies were also studied and the it was found that the negative experiences were at a low degree in proportion to the lack of information, one possessed with regard to crypto currencies.

3 Scope of the Study

Crypto currencies are growing at a rapid speed and are becoming more and more popular in the market. Although the same is no yet legalized, the crypto currencies are gaining momentum and are being widely used too. One among the major threats in dealing with crypto currencies is the high volatility of the currencies and uncertainty on traders' willingness to buy or sell. This study helps the investors in taking decisions. The study is focused on analyzing the Risk and Return of Crypto currencies in India.

4 Objectives of the Study

The main aim of the study is to analyze the Risk and Return of Crypto currencies in India. Therefore the main objectives are as follows:

1. To examine the volatility of select crypto currencies in India
2. To analyze Risk and Return of select crypto currencies in India
3. To offer suggestions to the Investors on the best traded crypto currencies.

5 Hypotheses of the Study

In an attempt to study the Risk and Return Analysis of Crypto currencies in India the following hypotheses was framed.

H01: There is no normal distribution among the select Crypto currencies in India.

H01: There is no correlation among the select Crypto currencies in India.

H01: There is no relationship between Risk and Return of select Crypto currencies in India.

6 Research Methodology

a. Period of the study

The period of the sample ranges from 1st Jan, 2015 to 31st Dec, 2021.

b. Sources and Collection of Data

The study mainly depends on secondary data. The daily average closing prices of Crypto currencies were gathered from www.yahoofinance.com and other secondary sources.

c. Sample Selection

Top 15 Crypto currencies in India based on the Market Capitalization were selected for the purpose of the study. Therefore, the Crypto currencies selected for the purpose of study are Bitcoin (BTC), Ethereum (ETH), Tether(USDT), Binance Coin (BNB), USD Coin (USDC), Ripple (XRP), Cardano (ADA), Solana(SOL), Terra (LUNA), Avalanche(AVAX), Polkadot(DOT), Binance USD(BUSD), Dogecoin (DOGE), Shiba Inu (SHIB) and Polygon (MATIC).

d. Tools for Analysis

The data was analyzed through statistical methods. The following tools were used for the analysis.

1. Descriptive Statistics (to find out the normal distribution of select Crypto currencies in India)
2. Correlational Matrix (to examine the relationship of select Crypto currencies in India), and
3. GARCH Model (to analyze the Risk and Return among the select Crypto currencies in India).
4. Return analysis:

The daily return calculated as follows,

$$R_{it} = \text{Ln}[C_{it}/C_{it-1}]$$

where:

R_{it} = the daily return on day t for Crypto l.

C_{it} = closing values for Crypto l.

C_{it-1} = closing values for Crypto l on day t - 1.

Ln = natural log.

These tools were used for testing the Risk and Return analysis of the select Crypto currencies in India and also to study the volatility of the Crypto currencies. The statistical tools for the study was made with the help of E-Views (Version 9.0) and Microsoft Excel.

7 Data Analysis and Interpretation

Figure 1 shows that Risk and Return Analysis of Crypto currencies in India.

Out of the 15 select Crypto currencies under study, 10 Crypto currencies such as, ADA USD, AVAX INR, BNB BUSD, BNB USD, BTC USD, DOGE USD, ETH USD, LUNA1 USD, MATIC USD and SHIB USD are highly volatile. In the case of the remaining 5 Crypto currencies such as, SOL USD, USDC USD, USDT USD and XRP USD, moderate price movements were exhibited. The assessment of the Crypto currencies also revealed the DOGE USD (1.52) recorded the highest return. On the hand the lowest return as well as the most Risky crypto currency appeared to be MATIC USD (-0.72).

Table 1 shows that Descriptive statistics of Selected Crypto currencies in India. The mean value of the ADA USD, AVAX INR, BNB BUSD, BNB USD, BTC USD, DOGE USD, ETH USD, LUNA1 USD, MATIC USD and SHIB USD, SOL USD, USDC USD, USDT USD and XRP USD are 0.001706, 0.004474, 0.004957, 0.004957, 0.003139,

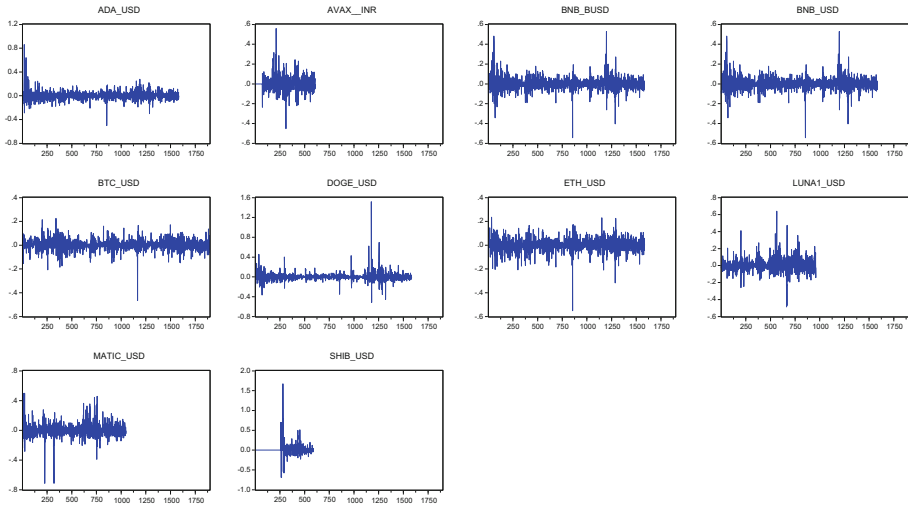


Fig. 1. Risk and return analysis of crypto currencies

Table 1. Descriptive statistics of Crypto currencies.

DS	ADA USD	AVAX INR	BNB BUSD	BNB USD	BTC USD	DOGE USD	ETH USD	LUNA1 USD	MATIC USD	SHIB USD	SOL USD	USDC USD	USDT USD	XRP USD
Mean	0.001706	0.004474	0.004957	0.004957	0.003139	0.001367	-0.000283	0.003156	0.002530	0.005257	0.009221	-1.53E-06	-1.35E-05	0.001159
Median	-0.003041	0.000000	0.000736	0.000736	0.005593	-0.001034	-0.000459	-0.003389	-0.00074	0.000000	0.004530	6.34E-05	-0.000132	-0.002457
Maximum	0.861543	0.558960	0.481792	0.481792	0.225119	0.455579	0.234741	0.641393	0.498186	1.673976	0.387184	0.042439	0.056606	0.466885
Minimum	-0.288683	-0.452755	-0.342421	-0.342421	-0.20753	-0.368029	-0.20686	-0.260462	-0.715681	-0.693147	-0.465355	-0.037233	-0.048198	-0.351975
Std. Dev.	0.086417	0.078772	0.068303	0.068303	0.048921	0.069257	0.054077	0.071907	0.088214	0.133202	0.087952	0.005828	0.006163	0.072526
Skewness	3.120430	0.643910	1.008763	1.008763	-0.098844	0.834324	-0.156455	2.106254	-0.913507	3.911044	-1.13068	0.370705	0.733113	1.956059
Kurtosis	28.01446	10.00129	11.37464	11.37464	5.609148	10.42825	5.171230	17.19002	20.96904	55.14262	6.080175	14.31832	22.78207	18.54611
Jarque-Bera	16284.45	1241.576	1818.023	1818.023	167.7449	1420.101	117.8399	5367.994	7992.502	68110.92	234.1168	3152.133	9640.261	6296.161
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	1.002393	2.630894	2.914965	2.914965	1.843821	0.805759	-0.1664	1.855488	1.487734	3.091042	5.422124	-0.000098	-0.0072	0.681230
Sum Sq. Dev.	4.383614	3.642349	2.738513	2.738513	1.404833	2.815574	1.716567	3.055143	4.567850	10.41503	0.019940	0.022297	3.087640	
Observations	588	588	588	588	588	588	588	588	588	588	588	588	588	588

Source: Compiled from Eviews 9

0.001367, - 0.000283, 0.003156, 0.002530, 0.005257, 0.009221, - 1.53E-06, - 1.35E-05, and 0.001159 respectively. On the basis of Mean, it is noticed that other than USDC USD, USDT USD and ETH USD all other Crypto currencies reflect a positive mean. The coefficients of the skewness were also found to be significant and positive for majority of the returns. The coefficients of the Kurtosis was positive and is remarkably higher than 3, which indicates a high leptokurtic distribution compared to the normal distribution for all the returns. The Jarque-Bera test goes above to the probability values. Hence, the null hypothesis There is no normal distribution among the select Crypto currencies in India is rejected and the alternate hypothesis is accepted i.e., There is a normal distribution among the select Crypto currencies in India.

Table 2 presents the Correlation Matrix of Crypto currencies from 1st Jan, 2015 to 31st Dec, 2021. The Correlation Matrix of Crypto currencies are ADA USD, AVAX INR, BNB BUSD, BNB USD, BTC USD, DOGE USD, LUNA1 USD, MATIC USD and SHIB USD, SOL USD, USDC USD, ETH USD, USDT USD and XRP USD shows 36 lags during the period. From the overall analysis of the returns of Correlation Matrix

Table 2. Correlation matrix of Crypto currencies.

CM	ADA USD	AVAX INR	BNB BUSD	BNB USD	BTC USD	DOGE USD	ETH USD	LUNA1 USD	MATIC USD	SHIB USD	SOL USD	USDC USD	USDT USD	XRP USD
ADA USD	1	-0.023	0.423	0.423	0.014	0.533	0.598	-0.018	0.128	-0.023	0.035	0.032	-0.009	0.660
AVAX INR	-0.023	1	-0.027	-0.027	-0.110	0.022	-0.031	-0.027	-0.002	-0.055	0.086	-0.028	-0.001	0.004
BNB BUSD	0.423	-0.027	1	1.000	0.039	0.487	0.552	-0.017	0.023	0.024	-0.010	0.070	0.019	0.395
BNB USD	0.423	-0.027	1.000	1	0.039	0.487	0.552	-0.017	0.023	0.024	-0.010	0.070	0.019	0.395
BTC USD	0.014	-0.110	0.039	0.039	1	0.017	0.030	0.013	-0.027	-0.023	0.009	-0.010	-0.003	0.011
DOGE USD	0.533	0.022	0.487	0.487	0.017	1	0.541	0.001	0.017	-0.005	0.037	0.086	0.020	0.498
ETH USD	0.598	-0.031	0.552	0.552	0.030	0.541	1	0.015	0.045	-0.011	-0.007	0.079	0.085	0.643
LUNA1 USD	-0.018	-0.027	-0.017	-0.017	0.013	0.001	0.015	1	0.018	-0.022	0.053	0.035	-0.022	0.009
MATIC USD	0.128	-0.002	0.023	0.023	-0.027	0.017	0.045	0.018	1	0.003	0.041	-0.016	0.075	0.020
SHIB USD	-0.023	-0.055	0.024	0.024	-0.023	-0.005	-0.011	-0.022	0.003	1	-0.007	0.056	-0.008	-0.026
SOL USD	0.035	0.086	-0.010	-0.010	0.000	0.037	-0.007	0.033	0.041	-0.007	1	-0.027	-0.028	0.023
USDC USD	0.032	-0.028	0.070	0.070	-0.010	0.086	0.079	0.035	-0.016	0.056	-0.027	1	-0.022	0.055
USDT USD	-0.009	-0.001	0.019	0.019	-0.003	0.020	0.085	-0.022	0.075	-0.008	-0.028	-0.022	1	-0.007
XRP USD	0.660	0.004	0.395	0.395	0.011	0.498	0.643	0.009	0.020	-0.026	0.025	0.055	-0.007	1

Source: Compiled from Eviews 9

of Crypto currencies, it is clear that Correlation Matrix of Crypto currencies had more number of lags with positive autocorrelation values whereas the remaining coefficients recorded low number of lags with positive significant during the study period. Hence, the Null hypothesis - There is no Correlation between the Risk and Return of select Crypto currencies in India is rejected and the alternate hypothesis accepted i.e., there is a Correlation between the Risk and Return of select Crypto currencies in India.

Table 3. GARCH model of Crypto currencies

		Coefficient	Std. Error	z-Statistic	Prob.
ADA USD	Constant	0.00008	0.001372	0.058351	0.9535
	C	0.000202	0.000020	9.976048	0.0000
	α	0.125005	0.007074	17.67014	0.0000
	β	0.835567	0.007926	105.4277	0.0000
AVAX INR		Coefficient	Std. Error	z-Statistic	Prob.
	Constant	0.000012	0.002888	0.004050	0.996800
	C	0.000114	0.000014	7.901626	0.0000
	α	0.123411	0.016935	7.287179	0.0000
	β	0.869773	0.015158	57.38143	0.0000
BNB BUSD		Coefficient	Std. Error	z-Statistic	Prob.
	Constant	0.001976	0.001205	1.639576	0.1011
	C	0.0001010	0.0000133	7.6337590	0.0000000
	α	0.1295700	0.0083310	15.5520900	0.0000000
	β	0.8523300	0.0090780	93.8853900	0.0000000
BNB USD		Coefficient	Std. Error	z-Statistic	Prob.
	Constant	0.0019760	0.0012050	1.6395760	0.1011000

(continued)

Table 3. (continued)

		Coefficient	Std. Error	z-Statistic	Prob.
	C	0.0001010	0.0000133	7.6337590	0.0000000
	α	0.1295700	0.0083310	15.5520900	0.0000000
	β	0.8523300	0.0090780	93.8853900	0.0000000
BTC USD		Coefficient	Std. Error	z-Statistic	Prob.
	Constant	0.0024570	0.0008990	2.7328350	0.0063000
	C	0.0001110	0.0000129	8.6019050	0.0000000
	α	0.1020800	0.0096810	10.5442800	0.0000000
	β	0.8411250	0.0151950	55.3560700	0.0000000
DOGE USD		Coefficient	Std. Error	z-Statistic	Prob.
	Constant	0.002376	0.000831	2.859049	0.0042
	C	0.0005430	0.0000293	18.5192200	0.0000000
	α	0.7842560	0.0169360	46.3061300	0.0000000
	β	0.4869660	0.0090470	53.8241400	0.0000000
ETH USD		Coefficient	Std. Error	z-Statistic	Prob.
	Constant	0.001311	0.001274	1.029077	0.3034
	C	0.0001730	0.0000285	6.0601280	0.0000000
	α	0.0820180	0.0076130	10.7730600	0.0000000
	β	0.8584230	0.0162710	52.7572900	0.0000000
LUNA1 USD		Coefficient	Std. Error	z-Statistic	Prob.
	Constant	-0.0001460	0.0022120	-0.0659280	0.9474000
	C	0.0003060	0.0000465	6.5788910	0.0000000
	α	0.1755750	0.0233040	7.5342520	0.0000000
	β	0.7988160	0.0249040	32.0759900	0.0000000
MATIC USD		Coefficient	Std. Error	z-Statistic	Prob.
	Constant	0.0026530	0.0021370	1.2414370	0.2144000
	C	0.0005850	0.0000925	6.3271440	0.0000000
	α	0.2624180	0.0236710	11.0860600	0.0000000
	β	0.6984740	0.0260950	26.7664100	0.0000000
SHIB USD		Coefficient	Std. Error	z-Statistic	Prob.
	Constant	0.001390	0.005413	0.256835	0.797300
	C	0.0002100	0.0000185	11.3960400	0.0000000
	α	0.1008470	0.0124790	8.0814950	0.0000000

(continued)

Table 3. (continued)

		Coefficient	Std. Error	z-Statistic	Prob.
	β	0.8879300	0.0103000	86.2064700	0.0000000
SOL USD		Coefficient	Std. Error	z-Statistic	Prob.
	Constant	0.0042700	0.0028600	1.4928730	0.1355000
	C	0.0014440	0.0003610	3.9957720	0.0001000
	α	0.1721020	0.0268940	6.3991610	0.0000000
	β	0.6185740	0.0718310	8.6114680	0.0000000
USDC USD		Coefficient	Std. Error	z-Statistic	Prob.
	Constant	-0.0000062	0.0000161	-0.3854120	0.6999000
	C	0.0000000	0.0000000	6.8459330	0.0000000
	α	0.3396180	0.0256210	13.2553200	0.0000000
	β	0.7469030	0.0128330	58.2033100	0.0000000
USDT USD		Coefficient	Std. Error	z-Statistic	Prob.
	Constant	0.0000098	0.0000131	0.7486190	0.4541000
	C	0.0000000	0.0000000	2.5224420	0.0117000
	α	0.4796740	0.0280960	17.0726800	0.0000000
	β	0.6918430	0.0124560	55.5428600	0.0000000
XRP USD		Coefficient	Std. Error	z-Statistic	Prob.
	Constant	-0.001669	0.001143	-1.460138	0.144300
	C	0.0001890	0.0000176	10.7615800	0.0000000
	α	0.2443320	0.0126540	19.3092000	0.0000000
	β	0.7623010	0.0113740	67.0199600	0.0000000

Source: Compiled from Eviews 9

The ARCH effect is significant for the selected Crypto currencies and GARCH effect also significant for all selected Crypto currencies. According to Log-L values are Negative (Lower) and AIC & SIC values are positive (Higher) for the selected Crypto currencies. Therefore, the values are opposite to GARCH (1,1) effect. To find out the asymmetries in terms of positive and negative implication, the GARCH (1,1) model was used. The result shows that the asymmetric values are positive shock (at 5% level of significance) has high impact on conditional variance compared to negative shock. Hence, the Null hypothesis, “There is no relationship between Risk and Return of Select Crypto currencies in India” is rejected (Table 3).

8 Limitations of the Study

1. The study was confined to India only.
2. The sample size was restricted to 15 top Crypto currencies in India.

3. This study aims at Risk and Return analysis of Crypto currencies in India only. Other aspects of analysis have not been considered.

9 Findings and Suggestions

The findings of Descriptive statistics, Correlation Matrix and GARCH Model are applied to test the Risk and Return analysis of crypto currencies in India. According to the Descriptive statistics return series have been distributed normally. The Correlation Matrix and GARCH model also examined for Risk and Return analysis of crypto currencies in India and it was found that there is a correlation between Risk and Return of select crypto currencies. Therefore, the study concludes that crypto currencies are highly volatile and traders stand a chance to earn high returns on the investments. Based on the analysis, the research study reveals that the highly performing crypto currencies are Bitcoin, Ethereum, Terra, Solana, Cardano, Tether, Binance Coin and Ripple (XRP). Therefore, these crypto currencies can be invested on a long term basis and the remaining crypto currencies can be traded on a short term basis.

10 Conclusions

The modern times trade calls for speed acceleration. The new era witnesses millions of transactions within a range of seconds. With Crypto currencies, transactions are dealt with at a lightning speed and this acceleration can result in development of the economy as well as flourishing business houses. The benefit of internet speed has taken the digital space to new levels and the economy has witnessed a paradigm shift as the digital transactions are growing at a random speed. The transactions are now taking the route of the digital space and therefore there is a growing trend of digital currencies witnessed despite the fact that the same has not been regularized and is not yet under the regulatory radar. Bulk transactions are now made possible due to the onset of the digital currencies. Despite challenges have been witnessed especially with respect to the volatility of the Crypto currencies and the environment of risks and uncertainties that pose a greater challenge, the growth of digital currencies has still been tremendous.

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Risk Assessment of Islamic Banking Products: A Case Study of Murabaha and Ijarah

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Abstract. There are several implications for the risk management strategy of any financial organization that has adopted the Islamic banking philosophy. Generally speaking, Islamic banking is exposed to the same risks as traditional banking, such as credit, market, liquidity, and operational risks. On the other hand, the sources of risk and risk mitigation strategies differ from those used in conventional banking. Many agreements may be subjected to the same risks, but how those risks influence each contract may vary. Islamic banks are obligated to follow Shariah principles in their business activities. According to Islamic law, loans and deposits with a predetermined fixed return are not permitted under Shariah principles. Consequently, Islamic banks' resource mobilization and funding are based on profit-sharing and risk-sharing arrangements. While risk is a necessary component of Islamic business dealings, uncertainty (Gharar) is illegal. This article aims to assess the specific risks associated with contracts issued by international financial institutions (IFIs), emphasizing two types of Shariah contracts, namely Murabaha and Ijarah. It has been established that both Murabaha and Ijarah, sale-based contracts, will subject the financial institution to the same risks, including credit, operational, market, and liquidity risks.

Keywords: Islamic banking · Risks · Assessment · Murabaha and Ijarah

1 Introduction

The sub-prime crisis precipitated the financial crisis in 2008, which was caused by greedy investment bankers' desire to make quick money by selling CDO or securitized assets to other bankers without considering the consequences to the bank and market. It ultimately led to the collapse of a few big institutions on Wall Street, including Lehman Brothers, Bear Stearns, and AIG (Longstaff 2010). Because these large corporations were not adequately governed and considered, they failed to see the critical role of risk management in financial institutions, which has ramifications for the entire human-centered system (Crouhy and Bank 2009). Since then, regulations have established and expanded risk instruments and techniques to ensure that the financial market remains healthy and

sound (Hamilton-Hart 2008). Islamic banking and finance are among the participants in the financial markets, and they face the same risks as the conventional banking system. However, because Islamic banking and finance employ shariah principles and different underlying contracts from their counterparts, they face additional risks (Sari et al. 2022; Helmy 2012). The other risk, also known as unique risk, requires the management's close attention and treatment to ensure the resilience of the Islamic financial institution (IFI) on its day-to-day operation risk. Examples of unique risks include rate of return risk, shariah non-compliance risk, equity investment risk, and commercial displacement risk, and they are all critical.

Damodaran (2008) states that financial risk is "the variability of the actual return on investment around the expected return, even when those returns imply good outcomes". A risk is an unknown event that can interfere with attaining a well-planned goal in strategy, operations, finance, and compliance regarding banking. Bank assets and liabilities are exposed to various financial risks, each resulting in a direct financial loss to the assets or liabilities (Iqbal and Mirakhor 2012). Failure of borrowers to make loan payments on time, price fluctuation in a specific investment or property, fraud in documents, insufficient expertise or human resources, and system failure are all examples of unpredictability in a financial institution setting. The ability of a financial institution to effectively manage its risks will result in a competitive advantage and gain for the institution as a result of the risk-reward relationship.

Credit risk, market risk, liquidity risk, and operational risk are all risks that are typically linked with financial organizations (Meera et al. 2012). The associated risks are recognized as generic risks inherited by practically all financial institutions (Iqbal and Mirakhor 2012).

Risks may never be eradicated, but proper, efficient, and effective risk management can provide us with possibilities to profit from them in the long run. Banks are subject to unique hazards, with some of these risks resulting in financial losses and possibly a liquidity shortage. Conventional banks and Islamic Financial Institutions (IFIs) are subject to the same risks. However, due to the nature of their operation, IFIs are subject to several additional risks specific to IFIs only. The risks connected with Islamic financial institutions (IFIs) are associated with particular business strategies and contracts. This article evaluates the specific risks related to the warrants issued by IFIs, emphasizing two forms of Shariah contracts, namely Murabaha and Ijarah. It has been determined that both Murabaha and Ijarah, sale-based contracts, will expose the financial institution to the same risks, including credit, operational and market risks, and liquidity risks. According to the researchers' knowledge, there are many papers on assessing risks particular to Islamic banks; however, very little research has been conducted regarding the mitigating mechanisms. Thus, this paper will fulfill the lacuna.

There are five sections in this paper. The second section covers the several hazards to which financial institutions are susceptible. The third section focuses on the associated risks with Murabahah and Ijarah transactions. The fourth section includes guidelines and solutions for mitigating the risks associated with Murabahah and Ijarah. The last section concludes the paper.

2 Financial Institutions Are Subjected to Several Risks

Whether the financial institution is conventional or Islamic, all financial institutions are exposed to risks in their everyday business operations (Butt et al. 2022). These dangers can be classified in a variety of ways. According to Akkizidis and Khandelwal (2007), the significant types of risk associated with the financial industry can be divided into three categories: financial risk, which includes market, credit, and liquidity risk, business risk, which provides for managerial and strategic risk, and finally operational risk, which is related to people, process, and system. Financial risk includes market, credit, liquidity, business, managerial and strategic, and operational risk related to people, processes, and procedures. As a result of these risks, the survival of financial institutions is determined, as bank operations rely heavily on the money they receive from depositors and lend it to others to earn a profit. As a result, managing these risks is critical to prevent the bank from failing in an unforeseen incident.

2.1 Credit Risk

Regarding credit risk, defaults or delays in either payment or delivery of products are commonly referred to as defaults or delays. It is hazardous for conventional banks when their customers are late or default on their payments, which is the situation with many of them. In the case of Islamic banks, this risk can be caused by two main factors: the first is due to the customers' failure to pay on time or defaulting on their payments. The second is when the suppliers fail to deliver the goods on time or fail to produce products that meet the specifications specified by the customers. One more risk factor is an inefficient and inadequate management information system. The system should alert the credit risk manager if there is any discrepancy between the actual and predetermined times. If the system does not, it is difficult for the person in charge to manually identify the cases (Kusnandar 2022; Shah et al. 2021; IFSB 2005; Elgari 2003, BNM 2009; Varotto 2011). Neither Islamic nor traditional banks are exempt from this risk.

2.2 Market Risk

The risk associated with the volatility in the market values of stocks, bonds, Sukuk, and other money-market instruments is the market risk (also known as market exposure). Usually, banks hang onto their portfolios of these assets with the expectation of receiving a more significant and favorable return. Although it is possible to lose money by holding these assets, earning a lesser return than anticipated is also possible. As a result, banks should exercise extreme caution when selecting assets. The investment choice should only be made after all relevant observations and tests have been completed and evaluated (Reserve Bank of Australia Bulletin 1996; Hasan and Antoniou 2004; IFSB 2005). Neither Islamic nor traditional banks are exempt from this risk.

2.3 Operational Risk

The inefficiency and ineffectiveness of a bank's operations are caused by internal management failure, referred to as "operational risk". Information technology systems and

human resource management that are not up to par can contribute to this problem (Htay and Salman 2014). To put it another way, this risk can potentially inflict significant financial loss on financial institutions. To avoid this danger, it is critical for financial institutions to properly monitor their staff (IFSB 2005; Izhar 2010; Htay and Salman 2013). Neither Islamic nor traditional banks are exempt from this risk.

More critical risks are associated with the financial industry, especially Islamic finance, and the three principal concerns are briefly discussed above. Commodity risk, country risk (changes in country rating), equity market risk (changes in the value of equity instruments), reputational risk (an adverse event that may have an impact on the organization's behavior), legal risk (relates to issues on legislation), political risk (negative changes in political situation), concentration risk (grouping of several unfavorable risks together), regulatory risk (relate to non-compliance with regulatory requirements), and systemic risk are examples of such risks (relates to inter-connected damaging events across the industry).

3 Risks Involved with Islamic Financial Transactions

It should be mentioned that many different Islamic finance concepts are available on the market. This article will focus on two types of Islamic contracts, namely Murabaha and Ijarah, for this paper.

3.1 Murabaha Contract

Murabaha is an Arabic term that refers to profit. In contrast, technically, it is understood in Shari'ah to refer to the contractual sale of a specific commodity in which there would be an explicit agreement between the parties involved (Ibn Mandhoor 2003). In other words, a profit is made when a particular commodity is sold (the buyer and seller). Aside from that, the phrase is also being used by Islamic banks today because it is considered Shari'ah compatible. It is recognized as Shariah-compliant because it enables the financing of a product to be supplied upon the client's request and the ability for the consumer to defer making payments.

The Murabaha contract is one of the most often employed structures in Islamic finance. A Murabaha is a sale-based contract concerning commodities or goods purchased on credit (Usmani 2005). In a trustee sale, the seller must disclose the purchase cost and any markup or profit to the buyer. When it comes to the financial industry, a Murabaha agreement will typically involve three parties: the financial institution, which will act as an intermediary between the seller and buyer, the customer (as the buyer), and the seller. The financial institution will serve as an intermediary between the seller and buyer. Before engaging in Murabaha, the customer will enter a Wa'ad agreement to undertake or purchase an asset from the financial institution (El Gamal 2007). Following the customer's request, the financial institution will buy support from the provider in exchange for a one-time payment. After that, the asset will be given to the financial institution, which will result in the financial institution becoming the legal owner of the property. Subsequently, the purchase will be sold to the client at cost plus a markup or

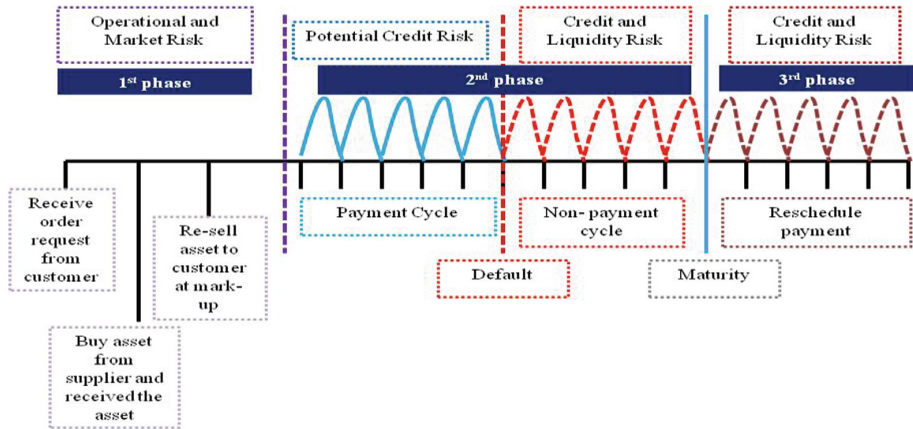


Fig. 1. The identification of risks in the Murabaha contract

profit. The customer will make a deferred payment to the bank by the contract terms (Resolutions of Securities Commission Shariah Advisory Council 2006). (Fig. 1)

Like any other sale or credit-based contract, a bank that enters into a Murabaha transaction will be exposed to credit, operational, market, and liquidity risks, among other things (Ahmed and Khan 2007). The customer designates the bank to act as a wakil or agent on his or her behalf to purchase a specific type of asset from a particular supplier during the first phase of a Murabaha transaction. A wa'ad, or promise, will be entered between the customer and the bank holding the specific asset, and the purchase requisition will be executed. With the wa'ad, the buyer is guaranteed not to breach his or her pledge without providing an adequate justification. The following step will be for the bank to acquire the specific asset from the specified supplier, who will, in turn, give it to the bank. Right now, the asset is owned by the bank in its entirety. As a result, the bank will sell the asset to the client and disclose the price (at cost plus a markup) that the customer will be required to pay on a delayed basis over a period that has been mutually agreed upon. Banks will be subject to various risks, the most significant operational and market risks during this cycle. The first is that, even if the client has entered into a wa'ad to purchase an asset from the bank, there is always a chance that the customer will be unable to honor the wa'ad and will refuse to accept delivery of the item.

A consequence of this exposure is that the bank will be exposed to physical assets and fluctuations in the asset's market price. On the other hand, the bank is the legal owner of the asset if the client honors the wa'ad before executing the Murabaha contract. As a result, the bank will be responsible for assuming and bearing the asset's operational and market risk (Ahmed and Khan 2007). The bank will be liable for damages, flaws, and spoiling before the asset is transferred to the client. During this stage, the bank will be exposed to market risks due to the fluctuation in the asset price.

At this point, both parties (bank and client) have agreed to the terms and conditions of the Murabaha transaction, with the consumer agreeing to the duration of the tenor and the number of installment payments to be made to the bank. There is still a possibility that the consumer will fail to make his or her credit payment as stipulated in the agreement. If the

customer cannot repay his obligation and fails to make his payment on time, the bank will be exposed to credit risk. The bank will be exposed to liquidity risk due to the customer's default. The anticipated incoming cash flow from the customer's installment has ceased, and the bank's ability to repay its other financial obligations may be compromised.

If both the bank and the client agree to reschedule the contract and extend the payment duration, the bank's potential loss may be reduced to the greatest extent possible. Despite this, the bank will continue to be exposed to credit risk. The client may continue to have problems making the payment, and, as a result, the bank will be exposed to liquidity risk, which will impact the bank's liquidity management.

3.2 Ijarah Contract

Ijarah comes from the verb *ajara*, meaning to reward or compensate in Arabic. The word *ijarah* is derived from the Arabic word 'al-ajr,' which translates as "compensation, recompense, consideration, return, or counter value" (al-'iwad) in exchange for the use of an object. The term "ijarah" is defined by Al Zuhayli as a contract to profit from a legal advantage in exchange for monetary consideration in Islamic law. If you hire something in *ijarah*, you are renting the right to use the object, not owning it. The sale of usufruct rather than a tangible entity is reflected in the term "ijarah".

It is a lease or commission contract involving the exchange of usufruct or advantages of an asset or a service for a fixed amount of rent or commission for a predetermined time. If we are talking about Islamic finance, the notion of *ijarah* is generally used in financing contracts, such as real estate loans, vehicle loans, project loans, or even personal loans. Under an *ijarah* contract, the bank will acquire the required asset(s) based on the customer's needs and lease the asset to the customer for a predetermined amount of time in exchange for an agreed-upon lease rental payment in most cases. Currently, two types of lease financing are available: operating leases and financial leases. Operating leases are the more common type of lease financing. The asset will be returned to the bank (as the original owner) (Marie Hurley 2010; Usmani 1998).

In contrast, during the term of a financial lease, asset ownership will be transferred to the client after the contract's tenure period. The concept of *al-ijarah thumma al bai* or *al-ijarah muntahia bi al-tamlik* (AIMAT) allows customers to lease assets from banks to purchase the leased assets at the end of the lease term. On the other hand, *ijarah* leasing structures enable customers to lease assets from banks with the option to purchase the leased assets at the end of the leasing term (AITAB). In both cases, asset ownership at the end of the tenure is the most significant difference. The purpose of the bank and customer is to enter into a sale and purchase agreement (AITAB) at the end of the contract tenure for the operating lease. In contrast, the bank and customer intend to provide the asset as a gift to the customer at the end of the contract tenure for financial leasing (AIMAT). The operating lease will be the subject of this paper's discussion for simplicity (Marie Hurley 2010; Usmani 1998).

At the beginning of the process, the bank (as the lessor) will enter into an *ijarah* agreement with the customer. The bank will be aware of the precise asset required by the client, such as a machine or a vehicle, for the customer's business operation under the terms of this agreement. Following this, the bank will acquire the relevant asset from the supplier, and the supplier will then deliver the asset to the bank, completing the

transaction. As soon as the bank has gotten the asset from the supplier, the bank will provide the leased asset to the client (as lessee). Following that, the customer will make the rental payment for the leased asset by the ijarah contract that was previously entered, which will, among other things, detail the rental amount and the length of the lease. The customer is responsible for returning the leased asset to the bank at the end of the contract's term or the conclusion of the leasing period (Fig. 2).

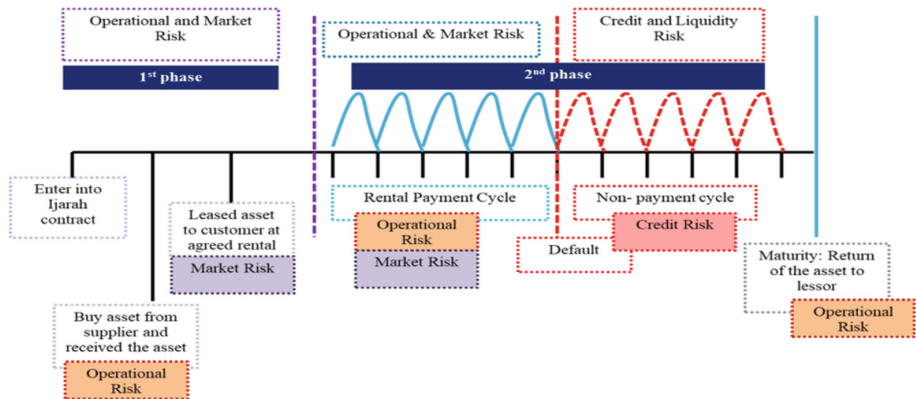


Fig. 2. Identification of risks in the Ijarah operation

While the Ijarah contract differs from a standard lease in several ways, its risks are comparable to those associated with the latter. Furthermore, the risks faced under an Ijarah contract are similar to those encountered under a Murabahah contract. The bank will be subject to market, credit, operational, and liquidity risk, among other things. The rental rate determined by the bank under an operating ijarah contract will be based on or benchmarked against the current market price. The rent can be fixed for the duration of the agreement, or the bank can determine it at a fluctuating rate agreed upon by both parties. If the bank agrees to charge the customer a fixed rental payment, there is a possibility that the rate charged will be less than the market rate. It may occur if the bank makes an incorrect forecast or projection of future economic conditions and behavior. In this case, the bank will be exposed to market risk and suffer a loss due to charging a lower rental rate than the benchmark. If the bank charges a floating rental rate in this case, it may limit its exposure to market risk since the bank will have the flexibility to vary the rental rate in response to changes in the market and economic conditions of the country. Although this is the case, charging a floating rental rate may expose the bank to market risk during periods when economic development is predicted to be sluggish. As a result, the rental rate is expected to decrease.

The bank will be exposed to credit and liquidity risks whenever a customer cannot satisfy his or her financial obligations. It could be attributed to a variety of factors. Among the others are the following:

- The customer's business operation has failed for various reasons.
- A client's rental payment may be delayed because the customer is experiencing cash flow difficulties, mainly if the company is a fresh start-up whose revenue stream is insufficient to meet its operational expenses.
- A customer's company has not yet achieved a breakeven point, at which point the company will be profitable.
- When a customer decides to cancel a contract before the contract's expiration date, the deal is said to be "earlier terminated."

These situations could expose the bank to credit and liquidity risks. The bank's ability to manage liquidity will be hampered due to a disruption in the expected cash flow to be received by the bank.

The bank is the legal owner of the asset when operating *ijarah* transactions. As a result, damage to the asset may be possible in the event of a disaster or catastrophic condition such as a hurricane or earthquake. Because of this, the bank will be subject to operational risk, which means that the bank may suffer losses due to the incident. Aside from that, any damage to an asset that a customer may cause during the lease term will expose the bank to operational risk. There is a potential operating loss that the bank will be required to incur in providing services for the asset's upkeep.

4 Mitigation of Risks in Islamic Financial Contracts

As previously discussed, various risks are associated with Islamic finance offerings. In specific contracts, Islamic finance products are deemed riskier than conventional bank products because the former will be exposed to equity risk for *Mudharabah* and *Musharakah* contracts and commodity risk for *Murabaha* contracts, whereas the latter will not. Since hazards can never be eradicated, this section will address risk mitigation strategies that a bank may implement to mitigate or minimize risk exposure.

4.1 Risk Mitigation strategies in *Murabaha* and *Ijarah*

Credit Risk

The *Murabaha* and the *Ijarah* contracts exposed the bank to the same risks, namely credit, operational, and market risks, which will impact the bank's liquidity risks in the long term. It is a problem when a customer cannot meet his or her responsibility to make payments on time, as is the case with credit risks, widespread in both *Murabaha* and *Ijarah* contracts. As a result, one of the bank's procedures is to undertake a thorough assessment of the applicant from the beginning of the application process. This credit evaluation of the potential consumer will be similar to that of a traditional bank. Using the credit evaluation, the bank can determine whether or not to proceed with financing offerings, or vice versa, depending on the circumstances. While the process may be comparable to that of a conventional bank, the Islamic bank will need to confirm that the applicant's business operations will not conflict with the principles of *Shariah* before approving the application.

Even though the applicant has been evaluated, the bank may nevertheless seek collateral as a security to pledge the transaction that has been completed. The bank can liquidate the asset pledged as collateral to recoup the loss if the asset is used as collateral and its beneficiary ownership has been transferred to the bank; however, this is unlikely. When a bank accepts an asset as collateral, it must be sure to retain its value and not depreciate over time. In a typical housing financing transaction, the bank will hold the house being financed as collateral.

An interbank money market repo transaction occurs when a bank that requires funding pledges its asset (often a highly liquid investment product) as collateral to the lending bank in exchange for the funds it receives from the lender. In addition to requiring an asset as collateral, the bank may also need the customer to have a guarantor who will guarantee the financing transaction if the situation changes unexpectedly and the customer cannot meet his or her obligations under the loan terms. On the other hand, the bank must evaluate the guarantor to ensure and establish that he is capable and willing to settle the payment obligation of the guaranteed person. While an inadequate assessment of the guarantee will result in the bank being exposed to credit and liquidity risk, the bank may still be able to recover some of its losses from the guarantor.

Operational Risk

Suppose the customer decides not to honor the promise or wa'ad after the bank has bought the specific asset based on the customer's wishes. In that case, the bank may face operational risks under the Murabaha contract. Wa'ad, from the standpoint of Shariah, is a unilateral contract, and as such, it is not legally binding. Despite this, from a legal perspective in Malaysia, wa'ad is considered critical as long as the contractual parties agree to the terms and conditions before executing the relevant transaction. For this reason, when it comes to Murabahah, the bank will need to ensure that the customer is aware that the wa'ad that he enters into is legally binding and that failure to comply with this will result in the customer being required to pay the bank the cost of asset acquisition as well as other costs incurred during the process of purchasing the asset. This procedure does not violate the Shariah concept in any way.

To keep this from happening, one way to ensure that the asset is insured correctly is to ensure that the bank is responsible for it before executing the Murabaha contract and bears the costs of any damage or spoilage to it. Another way to avoid this is to ensure that the Murabaha contract is performed with the customer as soon as possible after completing the sale of the asset from the supplier. It will lower the risk to the bank associated with potential market risks that may arise due to fluctuations in the commodity's price. Exemplification: the execution of crude palm oil (CPO), utilized as a raw material in Malaysian banks' commodity Murabaha transactions for their financing or term deposits, takes less than a minute. As a result, the time it takes for a bank to purchase CPO from a supplier through the Bursa Suq Al Sila' (BSAS) platform to finalize the financing arrangement can be finished in minutes.

Because the bank is the legal owner of the asset in an operational Ijarah contract, it is highly advised that the bank obtains coverage from the takaful operator on the asset being leased to protect its interests. If there is any damage to the asset, the bank will be compensated by the takaful operator, and the bank's cash flow situation will not be adversely affected. As a lessor, the bank, on the other hand, should state that any damage

or soiling to assets caused by the customer or the lessee shall be borne by that customer and not by the bank as a lessor in the contract. To ensure that the asset is returned in good shape at maturity, the bank should implement a systematic service plan and may also undertake periodic inspections of the leased asset. To guarantee that the asset is returned in excellent shape upon maturity, the bank should implement a frequent service schedule and may also perform periodic inspections of the ijarah asset.

Market Risk

Market risk is typically connected with the commodity or asset used as the underpinning of Murabaha and Ijarah contracts. It is valid for both types of arrangements. While other criteria are considered when determining the profit rate charged to the client under a Murabaha contract, one of the considerations is the price of the commodities that the bank purchases and sells to the customer. As a result, the bank must have the most appropriate “best fit” technique or system to stimulate, analyze, predict future market prices, and blame those in the current fee. It is critical for a Murabaha contract since the markup or profit portion is fixed and must be disclosed upfront before the agreement can be executed. Both contractual parties must also agree upon it.

Under the terms of the Ijarah contract, the bank must be able to foresee or estimate the economy’s future growth rate, which will indirectly impact the expansion of business in the economy. It is particularly significant when dealing with contracts with a defined payback duration. Inaccurate forecasting and appraisal of economic growth and trajectory can easily result in the bank not realizing the asset’s total economic value since the rental rate charged may be lower than the market rate. The bank’s ability to conduct or stimulate future growth while maintaining that flawless stimulation or prediction of future economic growth is not achievable may. As a result, it reduces the bank’s exposure to market risks.

Risk Mitigation in Murabaha and Ijarah: Views from the Perspectives of Regulators

The bank will be required to develop risk management policies and procedures (P&P), including safeguards against the risks inherent in Islamic finance transactions (such as Ijarah and Murababaha transactions). This P&P shall apply during the pre-contractual period, during the contractual time frame, and at the termination or settlement of the agreement. Because the bank will have to own the asset before selling or leasing it to the customer, adequate risk management for inventory is required during the pre-contractual time. It is also necessary to have a system for assessing collateral and guarantor quality to value the quality of collateral and guarantor accurately. As part of the ijarah contract’s contractual time, the bank is highly encouraged to conduct frequent asset inspections. The bank will be obligated to monitor any substantial ijarah asset (for example, a machine). However, the bank may conduct sampling for generic assets (for example, a car) asset monitoring. A bank is expected to have an exit strategy during the settlement period to deal with the likelihood of a dire circumstance. It may involve the loss of legal capacity of the lessee, in which case the bank is highly encouraged to allow the lessee has permitted successors to continue the contractual transaction with the bank.

5 Conclusion

Whoever is involved in business cannot avoid the possibility of encountering risks during their operations. The same can be said for conventional and Islamic banks alike. In reality, human beings are exposed to a wide range of risks daily in their daily lives. To avoid it, we must work to find a solution, or at the very least reduce the risks if they cannot be eliminated. Both conventional and Islamic banks are exposed to liquidity, credit, operations, and the financial markets. However, there is a distinction in how these risks affect financial institutions because traditional banks' activities focus on interest and lending.

In contrast, Islamic banks' operations are more asset-based and share profit and loss. Each transaction in an Islamic bank has its own set of features that distinguish it from the others. As a result, the contracts for each transaction are unique as well. As a result, Islamic banks will be subjected to additional risks, such as equity investment risk, return on equity risk, and various other risks. Some of the contracts may be exposed to the same risks, but how each contract is affected by those risks may differ. All contracts, including the Murabaha and Ijarah contracts that have been detailed above, are affected by risks associated with operations, liquidity, credit, and the market.

On the other hand, the approach taken to each of the contracts differs. As a result, Islamic banks must have an effective risk management strategy. However, this research has limitations because it covers risks associated with Murabahah and Ijarah. Also, no comprehensive study has yet been conducted on Islamic banking products and their unique risks. Consequently, future research will fill the void.

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Enhancing the Role of Audit as an Effective Governance Mechanism via Digital Transformation

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Abstract. This paper aims to examine the digital transformation process of audit practices in Malaysia, and to examine how it could improve the role of audit as a governance mechanism. This study applied qualitative research methodology by conducting in-depth semi-structured interviews with six experts in the auditing field. The discussions were made in the following themes: 1) Overview of digital transformation in the audit practices in Malaysia; 2) Digital technologies as tool to improve the role of audit as a governance mechanism; 3) Challenges in the digital transformation of audit practices. The findings of this research mainly indicate that the digital transformation of audit practices in Malaysia is still in its infancy. Through this research, the audit practitioners can be informed of the potential of digital transformation to enhance the role of audit as a governance mechanism and its respective challenges. Therefore, necessary actions to accelerate the digital transformation process can be carried out by the audit industry in Malaysia.

Keywords: Audit · Digital transformation · Digitalization · Corporate governance · Technology

1 Introduction

For many of us, the world that we live in today is no longer the same as how it was in the past few decades. It is an era where technology and society evolve faster than what businesses and organizations could adapt to – an epoch known as the ‘digital Darwinism’. Businesses and organizations are left with no choice but to find solutions to catch up with the agile technology environment; and this can be done by implementing digital transformation of the organizations.

There is a growing fear that the digital transformation in the accounting and audit industry will cause the human resources to be obsolete by the end of the decade. However, experts believed that while increasing the efficiency in the use of data and information, digital revolution will not be able to completely replace human intelligence in the analysis (BDO Malaysia 2020). The question of human intelligence vs. machine intelligence has been debated in the past few decades. People used to fear that computer would have replaced the human job functions, yet history had proved it wrong. Today, people fear

similar threat from the artificial intelligence technology, and only time will tell. However, the optimist view remains that digital transformation would complement rather than replicate humans (Brown 2020). Although it may render some jobs obsolete, but it may also create new jobs at a rate that is higher than the job losses. Human intelligence would remain as valuable commodity, as long as humans are able to adapt to the disruptions. Thus, digital transformation should be viewed as a positive disruption which lets machines to do all the time-consuming and difficult tasks while allowing the workforce to focus more on the important critical decisions as well as soft skills via genuine human interactions.

A study on the role of technology in the auditing industry is important because as digitalization speeds with the proliferated use of technology in business process, the audit profession is expected to follow and move together with the technological advancement due to two main factors. Firstly, as the audit clients are exploring and implementing digital technologies in their operations, the audit firms need to respond to these changes. Auditors are now required to have a thorough understanding on these new technologies in order to perform their audit duties with due diligence. Secondly, as organizations themselves, audit firms also need to leverage digital technologies in order to increase efficiencies and to grasp many more benefits from digital transformation. Furthermore, in the case of Malaysia, digital transformation of the auditing industry is viewed as crucial to ensure that its development is aligned with the Malaysia Digital Economy Blueprint, and the MyDigital initiatives that were launched in 2021.

In view of the above discussion, this paper aims to examine the digital transformation process of audit practices in Malaysia, and to examine how it could improve the role of audit as a governance mechanism. The remainder of the paper is structured as follows. Section 2 presents the literature review. Section 3 elaborates on the research methodology. The research findings are discussed in Sect. 4, followed by the conclusion in Sect. 5.

2 Literature Review

The technology-organization-environment (TOE) theory proposed by Tornatzky and Fleisher (1990) is used in this investigation. Based on the TOE theory, this study considers three factors that are thought to affect organization in adopting digitalization namely technological, organizational, and environmental. Firstly, the theory describes the internal and external technologies that are pertinent to a corporation in the focused on the technological setting. This encompasses the existing firm practices (Lin and Lin 2008) as well as the external technologies that are available. Finally, the environmental context describes how the organization does its business and includes the nature of the industry, government inter-actions, and its competitors. The organizational context is defined as the organization's scope, managerial structure, and size (Tornatzky and Fleischer 1990).

Past studies proved that to understand how new technology can transform the world, it is important to remember that technology develops new traits on its own (Zuboff 1988). Holley (2004), with the support of Arsenie-Samoil (2010) and studies from FAR (2015; 2016), concludes that digitization of businesses is an unavoidable outcome that the audit profession cannot escape. In fact, the audit profession is already under pressure to change

in order to build trust in both audited reports and the profession itself (Power 2003; Caster and Verardo 2007). Nearon (2005) and Bierstaker et al. (2014) argue that the audit profession will need to adapt even more as a result of information technology's effects (IT).

Although auditors will profit from the use of digital technologies in terms of productivity, they must also be flexible to changes in society's expectations (Bierstaker et al. 2014; Caster and Verardo 2007). Changes in the audit profession are unavoidable as the profession undergoes a paradigm shift toward a more digital organisation (Breman and Felländer 2014; Byrnes et al. 2015; Caster and Verardo 2007; FAR 2016; Spraakman et al. 2015).

Auditors' working methods have not advanced much, although digitalization is said to make documentation and communication easier (Nearon 2005). Alles (2015), Iuliana and Tugui (2005) investigate if prior financial scandals such as Enron-Andersen and Parmalat have welcomed digitization of working processes. They believe that using digital information improves the efficiency and credibility of the auditor's work, impacting their working techniques. Some also anticipate that in the near future, the audit profession will be completely reliant on digital data and working methods (Bierstaker et al. 2001; Granlund 2007; Spraakman et al. 2015). Technology, according to Tarek et al. (2017), has transformed auditing from a traditional audit to an IT audit. Large audit firms, such as the Big Four, have invested in technology to assist auditors in carrying out audits as effectively and efficiently as possible. In order to complete an audit, information technology is required.

Thus, numerous academics have attempted to comprehend how new digital technologies, primarily Big Data and Artificial Intelligence, affect businesses in terms of data analysis and external reporting (Al-Htaybat and Von Alberti Alhtaybat 2017). However, there is still little research on audit businesses (Issa et al. 2016). Some have investigated how digital has affected audit firms' performance or risk analysis (Krahel and Titera 2015; Cao et al. 2015). Others have investigated how these technologies affect the accuracy of the auditors' conclusions (Brown-Liburd et al. 2015). For instance, Vasarhelyi et al. (2015) found that while audit firms (external audit) have not advanced at the same rate, the adoption of digitalization and analytics is growing for the internal audit environment. Hence, there are a few studies analysing the impact of digital on the transformation of audit firms and the audit process (Appelbaum et al. 2018; Manita et al. 2020).

Besides, researchers proved that even though auditors can often rely on consultants or outside third parties to implement new technology, a thorough understanding of the technology is still required before auditors can use the results for auditing purposes (Venkatesh et al. 2012). Hence, this study has a double interest. Firstly, this study expands on previous literature and fills a gap in the literature of accounting by evaluating how the digital transformation process of audit practices in Malaysia and how it could enhance the role of audit as a governance tool. Second, on the theoretical side, it can enrich the literature on governance and audit quality by bringing TOE elements impact into auditing process.

3 Research Methodology

This study applied qualitative research methodology by conducting an in-depth interview with the experts in auditing field. It is notable that conducting interview will enable the researchers to achieve applied research objectives especially in terms of implementing new technology (Holter et al. 2019) where little is known on this subject. Furthermore, interviews give participants the opportunity to express their idea freely compared to close ended questionnaire in quantitative research methodology. This study applied a semi-structured interview with questions prepared in advanced but flexible to change during the interview.

Principally, the selected participants should be able to give information on the crucial components and perspective associated to the phenomenon being studied (Sargeant 2012). In the current study, the participants are selected due to their experience and expertise in auditing task. It is divided into external and internal auditor. External auditor performs a vital function to the credibility of financial reports and the effectiveness of internal control (Baatwah et al. 2021). On the other, the internal auditor is a person who understands the audit procedures commended by the company (Rohaeni et al. 2022).

This study employed a purposeful sampling strategy with the criteria that the participants should have at least one-year experience in the auditing profession. The recruitment method includes sending e-mails to the firms in Perak, Selangor and Kuala Lumpur that listed in Malaysian Institute Accounting (MIA) directory. Besides, social media platforms such as Whatsapp and Facebook have been used to advertise the recruitment.

The present study was conducted with the compliance of research project/protocol ethical (U/SERC/160/2021) and the participants gave their consents prior to the interview session. Six participants have agreed to be interviewed and their details are presented in Table 1.

Table 1. Profile of participants

Participant ID	Position	Experience
Auditor 1	External auditor	Big 4 and Small & Medium Practitioners (SMP)
Auditor 2	External auditor	Big 4 and Small & Medium Practitioners (SMP)
Auditor 3	External auditor	Big 4 and Small & Medium Practitioners (SMP)
Auditor 4	External auditor	Big 4 and Small & Medium Practitioners (SMP)
Auditor 5	Internal auditor	Banking industry
Auditor 6	Internal auditor	Energy, manufacturing, health industry

The sample size is the determined using the saturation evaluation. Guest et al. (2006) indicates that saturation is derived when there is a constant pattern in participants' feedback is obtained. The current study performed the data analysis after each interview

session. The information obtained was transcribed from rough transcription to fine transcription. An inductive coding approach was conducted to quantify the scripts and categories it into appropriate theme. After six interviews, the feedback from the participants shows a constant pattern. Hence, the themes were summarized to produce the outcomes for this study.

4 Findings

The findings were analyzed according to the following themes: 1) Overview of digital transformation in the audit practices in Malaysia; 2) Digital technologies as tool to improve the role of audit as a governance mechanism; 3) Challenges in the digital transformation of audit practices.

4.1 Overview of Digital Transformation in the Audit Practices in Malaysia

All interview respondents unanimously agreed that the digital transformation landscape of audit practices in Malaysia is still in its infancy stage. In some companies, the audit workspace is still confined to digitization, whereby it centers on converting information and data from a physical form to an electronic form. As of now, other advanced technologies which offer highly practical solutions such as artificial intelligence (AI), blockchain, etc. are still not seen in the Malaysian audit practice.

The extent of digital transformation differs between companies or audit firms. It depends mainly on the company size and the vision of the top management. In particular, digital transformation in audit practices in Malaysia differs between the big audit firms and the small & medium practitioners (SMP). For big audit firms, the digitalization in audit practices in Malaysia is not far behind compared to other countries. Whatever audit and analytics tools being implemented at the global level such as in the U.K. or U.S., will be implemented in Malaysia too. For instance, Auditor 1 shared his experience in Big 4 using a powerful analytics tool which enables the auditors to extract all general ledger items, detect any unusual items, as well as set parameters to detect anomalies or items that could lead to fraud. Meanwhile, SMPs are found to be more familiar with audit software tools, but less with analytics tools.

Similarly, industry maturity plays a role in the extent of digitalization of the internal audit practices. Having audit experience in three different industries, Auditor 6 shared that working in a global energy company had provided him more exposure in using data analytics for auditing.

Thanks to the pandemic, audit practices have somewhat been forced to step up its digital transformation process. Auditor 6 pointed out that the pandemic serves as a wake-up call for companies to pursue digitalization in order to ensure the business stay running as a going concern. Auditor 4 further supported:

“The digitalization landscape in Malaysian audits is quite barren, in my opinion. We had to go through MCO 1.0, 2.0 and 3.0 to understand how far back and unprepared we were for a working from home (WFH) environment. The only digitalization we can pride ourselves in is reviewing work digitally through PDF and e-mails, as well as having virtual meetings on Microsoft Teams or Zoom.”

From the interviews, a few examples of digitalization process and applications currently used by the audit industry were highlighted. One of the first mentioned was audit software. This is particularly applicable to big audit firms, but the medium-sized firms are catching up as well. However, Auditor 4 cautioned that there are trade-offs between convenience and audit quality when using audit software. With compliance being the crux of the audit matter, eventually it boils down to individual auditor's skills, skepticism, and critical thinking.

Second, the test using Computer Assisted Audit Techniques (CAATs). This is an internal control procedure which runs the test-of-one that is normally conducted by the information technology (IT) team. If the test-of-one is successful with no exceptions to note, the entire automated internal control is concluded to be effective. Therefore, it reduces substantive work by the auditors in that particular area.

Third, the e-Confirm system. This system is the initiative of Malaysian Institute of Accountants (MIA) which aims to facilitate communication between audit firms and financial institutions. The system allows requesting and receiving audit confirmations via a single and standardized platform which ultimately helps to reduce paper waste, reduce errors/omissions, and saves time.

Fourth, data analytics. Despite digital transformation that is generally moving at the speed of glacier, data analytics is seen to be finding its way to audit practices faster than others. Data analytics seems to be thriving well in bigger firms because of the financial feasibility of investing in such software and expertise.

Fifth, Audit Command Language (ACL). It refers to a prototype language for designing a feasible interactive conversational language for auditing purposes (Will 1983). As pointed out by Auditor 5, ACL enhances the audit process, specifically in fraud detection. It is able to spot the theft case for forgery or tempered documents by imposing the fraud risk profiling for every submission. Unlike previously, auditors had to manually extract and scrutinize the data to find any irregularities.

4.2 Digital Technologies as Tool to Improve the Role of Audit as a Governance Mechanism

Another topic which emerged from the interviews was how digitalization could be used as a tool to improve the role of audit as a governance mechanism. Auditor 4 and Auditor 6 suggested that vouching and any other procedure which involves manually looking at invoices will benefit the most from digital technologies. With a particular reference to the potential use of artificial intelligence (AI), it is seen to reform the audit playing field. AI will learn to pick up the many types of possible discrepancies or anomalies, and no misstatement will go undetected. Subsequently, auditing would be able to give clients absolute assurance instead of reasonable/limited assurance.

Auditor 5 pointed out that digitalization plays a role as governance mechanism in audit process especially in terms of time efficiency in inspecting the documents and expedite the audit process, which saves costs and time. Nevertheless, the whole audit process still could not be completed without the deliberations by higher-level auditors such as managers and directors, especially for the more technical areas. This is because these technical areas require critical thinking and application of "substance over form" which need human intervention.

Meanwhile, Auditor 6 felt that digitalization could benefit the planning stage of auditing. With technologies, management may not want to rely on the sampling method anymore. It is possible that with the advancement of technologies, the audit could be carried out on full population.

“Sometimes, auditors conduct audit more than what we need to do. Current practice, we did apply risk-based auditing. We focus on high and medium risk. However, if we can scope down a little more to what really matters and important, it will benefit us. It’s not that we want less things to do, but better we do things what matters, wasting time and tiring. At the end of the day, we want management to benefit from the audit work we do.”

Auditor 1 shared that in certain Big 4, they are using drone system to observe the stock count process, which is one of the substantive procedure auditors have to perform. When it was first conducted in Malaysia, they were assisted by experts from other countries. This is however, may not be applicable to the SMP yet due to the different type of clientele. In Big 4, the client base is normally larger corporations with higher needs and capability to develop and to use advanced digital technologies in their operations.

Meanwhile, Auditor 2 brought the attention to two main angles of digitalization in audit namely, safekeeping of documents (storage), and execution of procedures. It was highlighted that digitalization helps in terms of safekeeping documents with the advent of cloud storage. With that, data are well-organized and easily retrieved whenever required. In terms of performing the audit procedures, digitalization really helps in the planning, execution, and concluding process. For example, the use of analytic tools not only assists auditors to perform audit procedures, but more importantly it helps auditors to gain understanding of the auditee’s business process.

In view of the above issue, digitalization is seen to be a useful tool which could be used to overcome the problem and hence improve the role of audit as a governance mechanism. Auditor 4 highlighted:

“With digitalization, you cannot beat machines most of the times because a machine has no emotions. It doesn’t recognize fatigue like humans do. Digitalization will definitely elevate audit as a governance mechanism in financial markets.”

The finding is illustrated in Fig. 1. It depicts that the digital transformation in audit practice will enhance the audit role as governance mechanism.

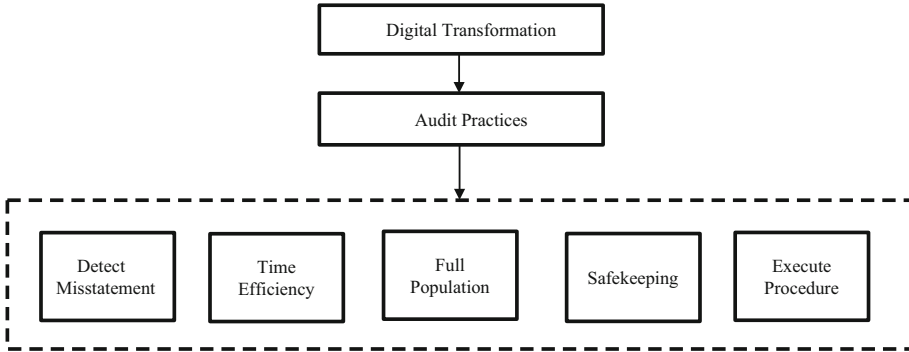


Fig. 1. Proposed model on digital transformation in audit practices

4.3 Challenges in the Digital Transformation of Audit Practices

The interviews revealed a few main challenges that delayed the digital transformation progress in auditing. First, getting the right tone set at the top management level. To a certain extent, governance could be a double-edge sword. On the one hand, it ensures things are done properly and systematically. On the other hand, it slows down business due to various compliance procedures, hence affecting profits. Therefore, the management needs to have the right balance between governance and profitability.

Second, the challenges in terms of resources. Auditor 4 highlighted that the decision to invest in advanced technologies must be based on the cost-benefits analysis which takes into account the nature of firm’s business itself. While some Big 4 firms are piloting such technologies to improve audit quality, the cost of investment can be too hefty such that the costs outweigh any potential benefits for the smaller firms. Smaller firms generally have smaller clientele with less complex transactions, in which case there is less urgency for such advanced technologies to be in place.

Third, the incomplete process of digitization and digitalization. For companies which only issue e-invoices, it is easier to adopt data analytics for auditing. However, many companies in Malaysia are still issuing physical invoices due to habit, convenience and ease of access. Therefore, with documents still in physical form, it remains a barricade to digital transformation. Information must be digitized prior to it being processed and analyzed digitally. This will result in high financial cost to the parties involved. In view of this challenge, advanced digital technologies such as AI and machine learning could be years away from penetrating audit industry.

5 Conclusion

With current trend of organizations moving in the trajectory of digital transformation, the audit industry is left with no choice but to follow suit. This paper highlights the overview of digital transformation in the audit practices in Malaysia, how digital technologies can be used as tool to improve the role of audit as a governance mechanism, and the challenges in the digital transformation of audit practices. Through this research, the

audit practitioners can be informed of the potential of digital transformation to enhance the role of audit as a governance mechanism and its respective challenges. Therefore, necessary actions to accelerate the digital transformation process can be carried out by the audit industry in Malaysia. Opportunities exist for fellow scholars to examine different perspective of digital transformation in audit practices such as from the client and government authorities' point of view. Specifically, future researchers may explore the client readiness to use digital tools for preparing their audit documents, or to conduct research on the preparedness of government authorities towards digital transformation in audit. In addition, other research could extend our approach to quantitative research design and examine the factors that leads to digital transformation in audit practices.

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Promoting the Adoption of Islamic Microfinance in Nigeria: The Moderating Role of Religiosity

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Abstract. Islamic microfinance banks are generally known for promoting financial and social inclusion, especially in areas with low level of financial access resulting from either voluntary or non-voluntary factors. This paper, thus, examined the determinants of intention to adopt Islamic microfinance (IMF) in Nigeria, and the moderating role of religiosity between the constructs. The paper employed the proportionate stratified random sampling technique to collect data from 450 respondents, using close-ended questionnaires. The data was analyzed using Analysis of Moment Structures-Structural Equation Modeling (AMOS-SEM). The decomposed theory of planned behavior (DTPB) was used as the underlying theory to test six hypotheses. Results showed that intention to adopt Islamic microfinance is high in Nigeria, and attitude, subjective norm and perceived behavioral control were positive and significant in influencing the intention to adopt Islamic microfinance. Furthermore, religiosity was found to moderate the relationship between subjective norms and behavioral intention. Consequently, the study recommends the need for stakeholders in the Nigerian financial system to enhance advocacy aimed at improving public attitude towards Islamic microfinance banks. On their part, Islamic microfinance banks needs to expand their marketing operations, in order to promote adoption and social inclusion. Overall, the study provided additional insights to the growing literature of Islamic finance in Nigeria, which will assist in shaping Islamic microfinance policy. The study also showed the role of referents among highly religious people, in influencing the behavioral intention to adopt Islamic microfinance.

1 Introduction

Islamic microfinance is the provision of financial services among the low income based on Islamic Sharia. It operates based on “Islamic jurisprudence which prohibits dealing in interest, the avoidance of *gharar* (ambiguity), participating in risk-sharing activities, and ensuring the welfare of all members of the society” (Nabi, Islam, Bakar and Nabi 2017). It is therefore the “Shari’ah-compliant way of providing financing to those rejected by the mainstream financial services, to help them start up microenterprises or maintain their existing businesses” (Hassan 2015). In addition, Islamic microfinance is beyond the provision of financial inclusion (Ali 2015; Hassan 2015), it also provides social

inclusion through the twin tools of lending and zakat. In addition to financial inclusion, it also provides social inclusion through the social instruments of zakat, Sadaqat and waqf.

Consequently, the Central Bank of Nigeria approved the Guidelines on the Regulation and Supervision of Non-interest (Islamic) Microfinance Banks (NIMFBs) in Nigeria. This is to ensure that NIMFBs play an important role of enhancing financial inclusion by bringing individuals, communities and corporations that may not be captured by conventional MFBs into the formal financial sector. The target clients of these banks are “the poor and low-income, unbanked and the under-served as well as other microenterprises” (Central Bank of Nigeria 2017). This is due to their role in reaching out and bringing into the formal financial system, individuals, communities and corporations that may have been excluded from conventional microfinance sub-sector through the provision of alternative microfinance financial products and services to consumers based on profit and loss sharing principles.

As such, the CBN intends to leverage on the NIMFBs to further promote financial inclusion, as well as reduce the disparity, in terms of access to financial services, between the predominantly Muslim population in Northern Nigeria, and the rest of the country. For instance, while in the south-east, south-south and south-west, more than half of their adult population (59.0, 55.0 and 78.0%, respectively) were accessing formal financial services by end-2016, in the north-west, north-east and north-central, only 24.0, 25.0 and 48.0%, respectively, enjoy formal financial services in 2016. Furthermore, “only 33% of adults in north-east and north-west (combined) are financially included” (Central Bank of Nigeria 2019). Thus, while 36% of Nigerian adults are excluded from accessing formal services, 55% and 62% are excluded in the north-east and north-west, respectively. This is far above the national average.

The objective of this study is therefore to examine the determinants of intention to adopt Islamic microfinance (IMF) products, to promote financial inclusion, and the moderating role of religiosity in the usage of these financial products. The paper is structured into five sections, with the introduction as Sect. 1. Section 2 reviewed relevant literature and developed the research hypotheses. Section 3 contained the research methodology and methods of data analysis, while Sect. 4 presented and discussed the major findings of the study. Section 5 concludes the paper with recommendations and areas for future research. Results of the study showed that attitude, SN and PBC are positively and significantly influence the use of Islamic microfinance banks, and highly religious people are more likely to adopt IMFPs based on the advice of referents.

2 Literature Review and Study Hypotheses

2.1 Religiosity and Adoption of Islamic Financial Products

Religiosity is a multi-dimensional concept pertaining diverse aspects of the religion in question. These includes belief, practice, knowledge, experience and how they affect the daily activities and choices individual adherents. It is “a multi-dimensional term that describes belief, practice, knowledge, experience and consequences” (Hussein, Ehab and El-Bassiouny 2015; Zaid 2019). It affects the consumption pattern of individuals through enhancing or weakening his choice of a particular product, service, brand, possession,

causes or issues, among others. From the Islamic perspective, religiosity is manifested in the behaviors of a Muslim, including his economic activities and choices. Thus, a Muslim is expected to avoid prohibited economic activities, as enshrined in the Qur'an and Sunnah of the Prophet (SAW).

Several studies were carried out to examining the relationship between religiosity and the choice of Islamic financial products and services, and for a religious person, the relationship between religiosity and attitude is expected to be positive and significant (Ozturk 2020; Setayesh, Montazian and Rajabdoory 2017). This assertion has been verified by several studies. Nugroho, Hidayat and Kusuma (2017) found that religiosity significantly influences customer decision in choosing Islamic bank services. Earlier, Thambiah, Ismail, Ahmed and Khin (2013) examined the moderating effect of religious reasons and regional differences on the intention to use Islamic retail banking products and services in Malaysia. The study found that religion moderates the interaction between relative advantage, complexity, compatibility, and the intention to use Islamic retail banking, proving the importance of religion in influencing the choice of Islamic financial products and services. Similarly, Farouk, Md Idris and Saad (2018) examined the moderating effect of religiosity on intention to comply with the Zakat on employment income (ZEI) in Nigeria. While the results showed that the moderating role of religiosity between attitude and behavioral intention was not significant, the moderating effect of religiosity on the relationship between subjective norm and behavioral intention was positive and significant. As such, religiosity strengthens the relationship between subjective norm and behavioral intention.

Another study by Zaid (2019) found that religiosity has a positive impact on attitudes towards Islamic banks in Pakistan. As such, the more religious a person is, the more he or she is inclined towards Islamic banks. Banunaku, Kasera, Ssekiziyivu and Kimuli (2020) also concluded that attitude significantly mediates the relationship between religiosity and intention to adopt Islamic banking in Uganda. In addition, Oladapo, Omar, Muda and Abdurraheem (2019) found that awareness, knowledge and religion positively and significantly influences attitude towards participation in Islamic banking in Nigeria. Ajetunmobi, Aminat TitilayoIbrahim and Hamid (2018) also studied the adoption of Islamic home financing in Nigeria, and the results showed that religion moderates the relationship between attitude, subjective norm and perceived behavioral control, on the one hand, and intention on the other.

2.2 The Decomposed Theory of Planned Behavior

The Decomposed Theory of Planned Behavior (DTPB) was used as the underlying theory in this study. The DTPB was developed by Taylor and Todd (1995) in order to "have a better understanding of the relationship between beliefs and intentions". It was a decomposition of the Theory of Planned Behavior, which disintegrated the three belief structures of Attitude, Subjective norms (SN) and Perceived behavioral control (PBC) into multi-dimensional constructs, in order to make the relationships between the constructs "clearer and more readily understood". It also provides a stable set of beliefs that could be applied to different settings in order to provide more specific guidance in examining factors influencing intention or its determinants. This makes it more useful to applied researchers and practitioners. Furthermore, the DTPB employs the three

dimensions of TPB with an additional dimension to study behavioral intentions towards IT using multidimensional constructs (Aziz and Afaq 2018). Taylor and Todd (1995) came up with nine constructs. These are: “Attitudinal Beliefs decomposed in to: Relative advantage, Complexity and Compatibility; Subjective Norm: explained by Normative beliefs; and Perceived Behavioral Control decomposed as: Efficacy and Facilitating conditions” (Fig. 1).

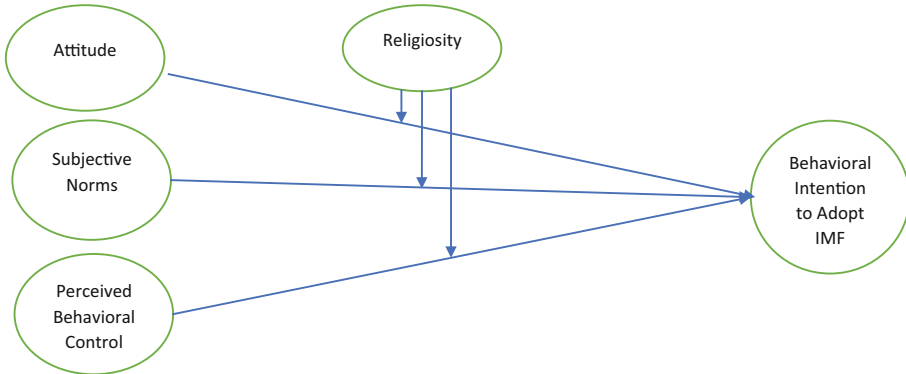


Fig. 1. Conceptual framework based on the decomposed theory of planned behavior

2.3 Review of Literature and Development of Study Hypotheses

Attitude Towards Islamic Microfinance

According to Ajzen (2012), attitudes “are formed by a series of beliefs which results in an individual placing a value on the outcome of a certain behavior”. Thus, if the outcome of a behavior is considered positive or desirable, a person’s attitude will be favorable to adopting it, which results in the person engaging in that behavior. Several studies were conducted, and the results indicated a positive relationship between attitude and behavior. A. D. Muhammad, Haneef and Mohammed (2016) found that Attitude directly and positively influences behavioral intention to use Islamic micro investment instrument in Nigeria. Similarly, Aziz and Afaq (2018) found a positive relationship between attitude and intention to use Islamic banking in Pakistan. Also, using DTPB, Echchabi and Azouzi (2015) found that Attitude had a significant and positive influence on Intention to adopt Islamic banking in Tunisia. Zauru (2017) employed TPB to examine the determinants of intention to accept IFPs in Nigeria, using financial inclusion as a moderating variable. He found that attitude had a positive and significant influence on intention. Similarly, Ucar (2020) examined intention towards the use of, and found a positive and significant influence between consumers’ attitudes and intention to use interest-free financing models in Turkey.

In contrast, Maulana, Razak and Adeyemi (2018) found that attitude does not influence the adoption on Islamic microfinance in Indonesia. Despite the negative relationship, results showed that customers perceived Islamic microfinance to be less burdensome due to its low cost of usage compared to conventional microfinance. Therefore, the

belief in the advantages of Islamic microfinance influences the customers' willingness to participate in Islamic microfinance. Thus, this paper hypothesized that:

H1: Attitude has a positive effect on the behavioral intention to adopt Islamic microfinance.

Subjective Norms

Subjective norm "is determined by the total set of readily accessible normative beliefs concerning the expectations of important referents" (Ajzen 2012). Individuals that are motivated to comply with or perform a certain action or behavior due to societal pressure from others will have subjective norm. SN is determined by normative beliefs, which is the expectation to engage in a behavior as required by certain people that society hold in high esteem. Several studies have examined the relationship between SN and intention, and most of them found that they are positively and significantly related. These include Aziz and Afaq (2018) in Pakistan; Ajetunmobi, Aminat TitilayoIbrahim and Hamid (2018) in Nigeria; Echchabi and Azouzi (2015) in Tunisia; and A. D. Muhammad et al. (2016) also in Nigeria. However, Maulana et al. (2018); Shih and Fang (2004); Ucar (2020); and Zauro (2017) found that SN do not significantly influence customers' intention. This paper therefore theorized thus:

H2: Subjective norm has a positive effect on the behavioral intention to adopt Islamic microfinance.

Perceived Behavioral Control.

Perceived behavioral control (PBC) is the person's perspective on how easy or difficult it is for him to perform a behavior. Hence, resources and opportunities available to a person "will have a certain degree of control on the likelihood of behavioral achievement" (Ajzen 1991). The relationship between PBC and intention is expected to be positive, as evidenced by several studies. These include Maulana et al. (2018) who studied factors affecting customers' participation in Islamic microfinance in Indonesia; Zauro (2017) in his study on Nigeria; and Ajetunmobi, Aminat TitilayoIbrahim and Hamid (2018) also in Nigeria. Additionally, Shih and Fang (2004) obtained a similar result in Taiwan. However, Aziz and Afaq (2018) found that the relationship between PBC and intention to use Islamic banking was positive, but insignificant. Similarly, Echchabi and Azouzi (2015) using DTPB found that PBC does not have a significant influence on the Intention to adopt Islamic banking in Tunisia.

H3: Perceived behavioral control has a positive influence on the behavioral intention to adopt Islamic microfinance.

Religiosity

Previous studies were able to establish the positive influence of religion towards the adoption of Islamic financial products. For instance, Zaid (2019) found that the more religious people are, the more inclined they will be towards Islamic banks in Pakistan. Banunaku et al. (2020) concluded that attitude significantly mediates the relationship between religiosity and intention to adopt Islamic banking in Uganda. In addition, Oladapo et al. (2019) found that awareness, knowledge and religion positively and significantly influences attitude towards participation in Islamic banking in Nigeria. Ajetunmobi, Aminat TitilayoIbrahim and Hamid (2018) also studied adoption of Islamic home financing in

Nigeria, and found that religion moderates the relationship between attitude, subjective norm and perceived behavioral control, and intention.

Consequently, religiosity influences attitude, subjective norm and perceived behavioral control. It also moderates the relationship between attitude, SN and PBC, and the intention to adopt Islamic financial products. This, in essence, indicates that the relationship between attitude, subjective norm and perceived behavioral control, and intention will be strong if the person's level of religiosity is high. In this study, it is expected that respondents with high level of religiosity should be more inclined to adopt IMFPs. This paper theorized thus:

H4: Religiosity moderates the positive relationship between attitude and behavioral intention to adopt Islamic microfinance.

H5: Religiosity moderates the positive relationship between subjective norms and behavioral intention to adopt Islamic microfinance.

H6: Religiosity moderates the positive relationship between perceived behavioral control and behavioral intention to adopt Islamic microfinance.

3 Research Method

3.1 Sampling Technique and Respondents

This paper employed the quantitative approach to determine the moderating influence of religiosity in the relationship between attitude, SN and PBC, and the behavioral intention to adopt Islamic microfinance in Nigeria. Proportional stratified random sampling technique was used to collect data from the adult population in the study area – comprising Bauchi, Kano and Katsina states - in Nigeria. In selecting the sample for this study, each of the three states was stratified based on existing local governments areas (LGAs). Three LGAs were selected from Kano State, while two each were selected from Bauchi and Katsina states. The selection of three LGs in Kano was to adhere to the proportional principle, given that the state is almost half of the total sample size.

Furthermore, local governments within the state capitals were selected as part of the strata for data collection because of their heterogeneous. This gave a fairer representation of different ethnic, income and occupational groups. Four enumeration areas (EAs) were randomly selected from each local government, giving a total of twenty-eight EAs. Sample population for the study was randomly selected based on the sampling frame obtained from the Office of National Population Commission. The data was also collected from both rural and urban areas, enabling the study to collect and analyze data from a more diverse and varied sample, which is a requirement for stratified sampling. Accordingly, Bauchi and Ganjuwa LGs were selected in Bauchi state; Dala, Kano Municipal and Kura LGs were selected in Kano state; and Katsina and Batagarawa LGs were selected in Katsina state. In total, data was collected from 450 respondents in the study, who form the potential customers of Islamic microfinance banks in the study area. The choice of the adult population is in line with a study conducted by Zauru (2017) in Kano, Nigeria. Structural equation modeling (SEM) was used for data analysis.

3.2 Survey Instrument

Questionnaire was used to elicit information for this study. The questionnaire was developed in the English language but also translated into the Hausa language (the dominant language of communication in the area of study) for easy completion by respondents. Responses were collected from the sample using a five-point Likert scale. The various dimensions measured by the questionnaire were adopted/adapted from previous studies to suit the objectives of the study. To achieve high response and ensure timeliness, the questionnaire was distributed by hand. This “gives a higher response rate in Nigeria because the research culture is still evolving” (Zauro 2017). The questionnaire has 11 constructs (factors) and 53 items adapted from previous empirical studies in the subject area, summarized in Table 1 below.

Table 1. Summary of adapted constructs

Construct	Type	Source	Items no.
Behavioral intention	IV	Aziz and Afaq (2018)	4
Attitude	DV	Maulana et al. (2018)	5
Relative advantage	DV	Maulana et al. (2018)	6
Complexity	DV	Aziz and Afaq (2018); Maulana et al. (2018)	5
Compatibility	DV	Maulana et al. (2018)	5
Awareness	DV	Maulana et al. (2018); Zauro (2017)	5
Subjective norms	DV	Maulana et al. (2018); Zauro (2017)	4
Normative beliefs	DV	Maulana et al. (2018); Shih and Fang (2004)	5
Perceived behavioral control	DV	Aziz and Afaq (2018); Shih and Fang (2004)	5
Self-efficacy	DV	Maulana et al. (2018); Shih and Fang (2004)	4
Facilitating conditions	DV	Aziz and Afaq (2018)	5
Religiosity	MV	Sharma et al. (2016)	5

3.3 Method of Data Analysis

Confirmatory Factor Analysis (CFA) was used for scale validation using SEM. The analysis was performed using Analysis of Moment Structures (AMOS). SEM is a combination of measurement and structural models. The “measurement model links the observed variables to a smaller set of latent variables, while the structural model links the

latent variables “through a recursive and non-recursive relationships” (Ramakrishna and Trivedi 2018). Accordingly, the measurement model enables the researcher to evaluate how well data of the observed variables combine to identify the underlying hypothesized constructs, while the structural model helps in specifying and verifying the hypotheses in the study. SEM therefore helps in discovering “the most parsimonious summary of the relationship among variables which reflects the associations observed in the data” (Weston and Gore Jr. 2006).

4 Findings and Discussions

As stated earlier, SEM was employed for data analysis, while SPSS was used to clean the data collected, as well as conduct significance tests to ensure that its stable and suitable for analysis. After that, confirmatory factor analysis (CFA) was conducted using AMOS.

4.1 Model Identification

The model was identified with chi-square of 985.38 and 574 degrees of freedom. A normed chi-square of 1.717 was attained, and according to Hooper, Coughlan and Mullen (2008), meets the recommendations of a ratio of up to 5% by both Wheaton (1977) and Tabachnick and Fidell (2007). According to Adeyemi, Mustafa and Oladipo (2013), “the ratio of <5.0 was most reported in SEM studies”. Furthermore, the model was significant at 1%, with a p-value of 0.000. The comparative fit index (CFI) was also considered to test the fitness of the model. It ranges from 0–1, and measures variation in the data. The closer the CFI is closer to 1, the better the model fit, and a CFI of $>.90$ is considered acceptable (Suhr 2006; Weston and Gore Jr. 2006). A CFI value of ≥ 0.90 was also considered acceptable by Ramakrishna and Trivedi (2018). Adeyemi et al. (2013) also reported that the threshold found for CFI in most existing studies using SEM is .90. For this study, a CFI of .937 was attained.

The Root Mean Square Error of Approximation (RMSEA) was also calculated to determine the model fitness. According to Bryne (2010), RMSEA is identified as one of the most informative criteria in structural modeling as it tests the factorial validity of the theoretical construct in relation to model misspecification. It thus, guides the researcher in measuring the model and helps in building confidence intervals around RMSEA values. A cut-off value of close to .06 was reported by Suhr (2006), while Bryne (2010) suggested a cut-off value of $<.05$ for model fitness. Values above the suggested cut-off indicates inadequate sample size. For this study, .045 was attained, confirming the model fitness and adequacy of the sample size in the study. Table 2 below summarized the criteria met for model fitness (Fig. 2).

Finally, an R^2 of 0.45 was obtained. According to Hair, Hult, Ringle and Sarstedt (2017), determining an acceptable level of R^2 is difficult because R^2 values “depends on the model complexity and the research discipline”. Whereas R^2 values of 0.20 are considered high in disciplines such as consumer behavior, in success driver studies such as customer satisfaction or loyalty, values as high as 0.75 are expected. In general, “ R^2 values of 0.25, 0.50, and 0.75 for target constructs are considered as weak, medium, and substantial, respectively” (Hair et al. 2017).

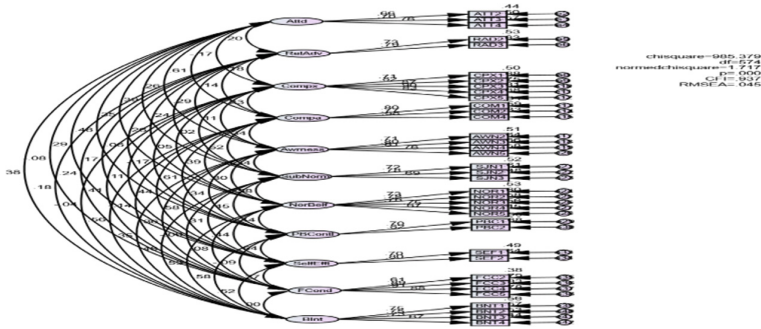


Fig. 2. The measurement model

Table 2. Summary of model goodness fit

S/N	Items	Requirement	Results obtained
1	Normed Chi-square	<5	1.717
2	P-value	>.05	0.000
3	CFI	>.90	0.937
4	Parsimony-adjusted index (RMSEA)	<.05	0.045

Reliability Assumptions

According to Sekaran and Bougie (2016), reliability “is a measure that tests both consistency and stability”. Cronbach’s Alpha assess reliability by measuring “how well the items in a set are positively correlated to one another”, and the closer the value is to 1, the higher the internal consistency. Hair et al. (2017) also recommended a Cronbach’s Alpha of 0.70 as acceptable, while a score of 0.60 is acceptable in exploratory research. Cronbach’s alpha values of >0.70 were attained for all the latent variables in this study, thus affirming the internal reliability of the measures in this study.

Validity Assumptions

Validity assumptions are concerned with the random and systematic error in a model. Validity is the “ability of a measuring device or instrument to measure what it is expected to measure – and nothing else” (Pandey and Pandey 2015). A model is thus expected to achieve both convergent and discriminant validity. Convergent validity represents the ability of a latent variable to correlate with other measures, and is measured by computing the average variance extracted (AVE) for the latent variables under consideration in the model. Hair et al. (2017) recommended that each latent variable under consideration is required to achieve a minimum AVE score of 0.50. They further suggested that indicators with loadings of 0.40–0.70 should be removed only if that increases the reliability of the construct.

Discriminant validity on the other hand is “the ability to ensure that distinct concepts are uncorrelated to each other” (Sekaran and Bougie 2016). In other words, it measures the extent to which a particular latent variable differs from the rest of the latent constructs.

This is attained when “the square root of each constructs’ AVEs in the model is larger than its correlation with other constructs” (Hair et al. 2017). In this study, all the latent constructs exhibited an AVE loading higher than 0.50. Appendix 1 summarized results of the validity tests, confirming the achievement of both convergent and discriminant validity in the model.

4.2 Results and Discussions

Attitude and Behavioral Intention

This paper hypothesized that attitude is positively related with behavioral intention to adopt Islamic Microfinance in Nigeria. The estimation outcome supported this hypothesis ($\beta = 0.147$; S.E = 0.078; $p = 0.06$), where a positive and significant relationship (at 10%) was attained, an indication indicates that respondents expect positive benefits from the adoption of Islamic microfinance. This is consistent with the findings of several empirical studies, including A. D. Muhammad et al. (2016), Zauro (2017), Ajetunmobi, Aminat Titilayo Ibrahim and Hamid (2018) and Oladapo et al. (2019) in Nigeria. Other studies with similar results include Aziz and Afaq (2018) in Pakistan and Ucar (2020) in Turkey. However, a study by Albashir, Zainuddin and Panigrahi (2018) which examined the factors affecting acceptance of Islamic banking and its usage by customers in Libya, discovered that attitude is not significant in influencing the intention to accept and use Islamic banking.

These findings revealed the importance of positive consumer attitude in the adoption of financial products and services, leading to higher adoption. Positive attitude indicates that the product or service in question is affordable, useful, easy to use, and conforms to the culture and beliefs of the potential users. Consequently, major stakeholders in the Nigerian financial system should embark on enlightenment campaigns that will improve the public attitude on the role of Islamic microfinance banks in the promotion of financial inclusion and poverty reduction. In addition, states and local governments must collaborate with other stakeholders to support existing Islamic microfinance institutions and encourage the formation of new ones.

Subjective Norms and Behavioral Intention

Results obtained supports the proposition that subjective norm has a positive and significant influence on behavioral intention to adopt IMFPs in the study area ($\beta = 0.241$; S.E = 0.052; $p = 0.000$) at 1% level of significance. This is consistent with the findings of Albashir et al. (2018) in Libya; Aziz and Afaq (2018) in Pakistan; and Zauro (2017) in Nigeria. Other studies by Echchabi and Azouzi (2015); Shih and Fang (2004) and Ucar (2020) in Tunisia, Taiwan and Turkey, respectively, obtained similar results.

The results established the role of societal influence on individuals to engage in certain behavior, by showing the role of family, peers and community leaders in the adoption of Islamic microfinance in the study area. This is an important finding, because according Rhule (2016), one of the major Islamic microfinance institutions use the concept of *kafalah* (otherwise known as responsibility, amenability or surety-ship) to mobilize beneficiaries and ensure that loans are repaid – similar to the ‘group liability’ approach used by conventional microfinance institutions. As such, Islamic microfinance banks could utilize the positive influence of family and community leaders through ‘*Kafalah*’, to encourage re-payments, thereby making the IMFBs more sustainable.

Perceived Behavioral Control and Behavioral Intention

This paper also proposed that perceived behavioral control will influence behavioral intention to adopt IMFPs. Results supported this assertion ($\beta = 0.505$; S.E = 0.077; $p = 0.000$) at 1%, therefore validating previous studies that made similar proposals. These include studies by Maulana et al. (2018) in Indonesia; Albashir et al. (2018) in Libya; Aziz and Afaq (2018) in Pakistan; and Zauro (2017) in Nigeria. However, results obtained by Ucar (2020) in Turkey contradicted the above. His study found that perceived behavioral control does not influence customer’s intention to adopt non-interest financing (Fig. 3).

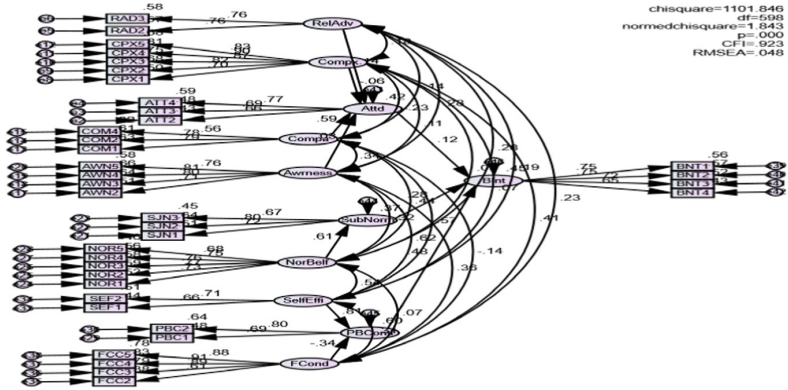


Fig. 3. Hypotheses testing

This result shows the positive disposition of respondents towards Islamic microfinance in Nigeria. More so, conventional financial products and services could be costly, thus inhibiting financial access among the poor and low-income groups. As a result of this positive disposition of the public, it is of import that government encourage the use of Islamic microfinance in order to promote financial inclusion among the poor and underprivileged through increased financial literacy, the promotion of conducive environment for the expansion of digital financial services, provision of stable regulatory and supervisory environment, and continued engagement and collaboration among all the stakeholders in the financial space (Table 3).

Table 3. Hypotheses tests and decision

		Estimate	S.E.	C.R.	P-value	Decision
Behavioral intention	Subjective norms	0.241	0.052	4.612	***	Supported
Behavioral intention	Attitude	0.147	0.078	1.884	0.06*	Supported
Behavioral intention	Perceived behavioral control	0.505	0.077	6.554	***	Supported

Moderating Influence of Religiosity

The study tested the moderating influence of religiosity between attitude, subjective norm and perceived behavioral control, and the behavioral intention to adopt Islamic microfinance. This is in line with previous studies that used religiosity as a moderator between an independent and a dependent variable, among whom is Thambiah et al. (2013), who examined the moderating effect of religiosity and regional differences on the intention to use Islamic retail banking products and services in Malaysia. The study found that religion moderates the interaction between relative advantage, complexity, compatibility and the intention to use Islamic retail banking. Similarly, Farouk et al. (2018) examined the moderating effect of religiosity on intention to comply with the Zakat on employment income (ZEI) in Nigeria. However, results obtained showed that the moderating role of religiosity between attitude and behavioral intention was not significant, but the moderating effect of religiosity on the relationship between subjective norm was positive and significant. As such, religiosity strengthens the relationship between subjective norm and behavioral intention.

Another study by Zauro (2017) introduced financial inclusion as a moderating variable between attitudes towards IFPs, subjective norms, perceived behavioral control among others, and intention to accept IFPs in Nigeria. Other studies that used moderators to test the relationship between latent variables include Ajetunmobi, Aminat TitilayoIbrahim and Hamid (2018) who used the decomposed TPB to determine the effect of religion on attitude, subjective norm and perceived behavioral control on the intention to adopt Islamic home financing in Nigeria. Results showed that religion moderates the relationship between attitude, subjective norm and perceived behavioral control, on the one hand, and intention on the other. Zaid (2019) analyzed the moderating role of public trust towards Islamic financial institutions in Pakistan, and results showed that religiosity has a positive impact on attitudes towards Islamic banks. As such, the more religious a person is, the more he or she is inclined towards Islamic banks. Also, the study found that trust in Islamic financial institutions influences the attitude of customers towards them.

To measure religiosity, this study collected data using a 5-Likert scale, and categorized into two levels: Low and High using SPSS. It is expected that respondents with high level of religiosity should be more inclined to adopt IMFPs (Table 4).

Table 4. Moderating influence of religiosity

Dependent variable	Independent variables	Low		High		z-score	Decision
		Estimate	P	Estimate	P		
Behavioral intention	Subjective norms	0.095	0.217	0.342	***	2.404**	Supported
Behavioral intention	Attitude	0.061	0.625	0.098	0.266	0.241	Not supported
Behavioral intention	PB control	0.523	0.002	0.345	***	-0.955	Not supported

Results obtained showed that H5 which postulated that religiosity moderates the relationship between subjective norm and behavioral intention was supported (z -score = 2.404) at 5%, attesting that highly religious people are more likely to adopt IMFPs based on the advice or perceived belief of people they afford respect to.

The other two hypotheses: H4 (z -score = 0.241) which theorized that religiosity moderates the relationship between attitude and behavioral intention to adopt IMFPs; and H6 (z -score = -0.955) which theorized that religiosity moderates the relationship between perceived behavioral control and intention to adopt IMFPs were not supported. The inability of religiosity to moderate the relationship between attitude and behavioral intention to adopt Islamic microfinance could be that in making financial decision, individuals consider the financial implications of their actions, insofar as they do not contradict their religious beliefs and practices. Thus, attitude and PBC could directly influence the intention of the respondents to adopt Islamic microfinance because the respondents could directly assess the compatibility of the products to their beliefs, the benefits of the products to their well-being, as well as their ability to use the products and services offered by these institutions without resorting to religiosity. As such, religiosity is not considered a good moderator of the relationship between attitude and PBC, and intention to adopt Islamic microfinance in the study area. Finally, the result showed that highly religious people tend to be more influenced by community leader and religious leaders, as well as people they hold in high esteem in adopting IMFPs.

5 Conclusion and Recommendations

5.1 Conclusion

This paper examined the effect of attitude, SN and PBC on the behavioral intention to adopt Islamic microfinance banks in Nigeria, as well as the moderating influence of religiosity between attitude, subjective norm and perceived behavioral control, and behavioral intention to adopt Islamic microfinance in Nigeria. Results disclosed that attitude, SN and PBC are positively and significantly influence the use of Islamic microfinance banks. However, in terms of moderating effect, religiosity could only moderate the relationship between SN and behavioral intention, indicating that highly religious people are more likely to adopt IMFPs based on the advice or perceived belief of people they afford respect to. The moderating influence of religiosity between perceived behavioral control and behavioral intention was, however, found to be negative and insignificant.

5.2 Recommendations

Based on the findings of this study, several recommendations were made. These include the need to enhanced enlightenment campaigns to improve public attitude on the role of Islamic microfinance banks in poverty reduction and deepening financial inclusion. There is also the need for government to ensure the provision of basic infrastructure such as road network, sustainable power supply and other amenities to ensure easy access to financial institutions and services for prospective users. Similarly, the CBN

needs to ensure the development of varied of non-interest products under the CBN interventions program, and the need to encourage Islamic financial institutions to market the products. On the part of Islamic microfinance banks, they should develop low-cost products, in order to favourably compete with their conventional counterparts, as well as use ‘*Sadaqat*’, ‘*Zakat*’ and benevolent loan as complementary tools to encourage social inclusion. These are expected to promote the adoption of Islamic microfinance in Nigeria.

5.3 Areas for Further Research

The main objective of this study is to examine the moderating influence of religiosity between consumer attitude, SN and PBC on the one hand, the intention to adopt Islamic microfinance products (MFPs) among prospective customers in some selected states in Nigeria. Results obtained should however be interpreted with caution due to some limitations of the study. For instance, the study was carried out in some selected states in the Northern part of Nigeria that is predominantly Muslim. The finding, and indeed conclusions of the study, may not be suitable for generalization to other parts of the country. A more generalized study covering the whole fabric of the Nigerian nation may be required for generalization across the country, especially, where the Muslim population is in the minority. Furthermore, there is the need for future studies to research more on the moderating role of religiosity on attitude and PBC using different sample in order to have a deeper understanding of this phenomenon.

Appendix

Appendix 1: Convergent and Discriminant Validity

	CR	AVE	MSV	MaxR (H)	Attnd	Rel Adv	Compa s	Awrnes	Sub Norm	Nor Bel	PB Contl	Self Efl	FCon d	BInt	Comp x
Attitude	0.751	0.502	0.373	0.756	0.709										
Relative Advantage	0.735	0.581	0.082	0.856	0.204	0.762									
Compatibility	0.762	0.521	0.376	0.906	0.611	0.141	0.722								
Awareness	0.856	0.598	0.334	0.941	0.259	0.287	0.338	0.774							
Subjective Norm	0.777	0.538	0.332	0.951	0.391	0.242	0.518	0.344	0.733						
Normative Belief	0.856	0.544	0.332	0.962	0.346	0.257	0.393	0.299	0.576	0.738					
Perceived Behavioral Control	0.739	0.587	0.376	0.966	0.477	0.062	0.613	0.335	0.446	0.437	0.766				
Self-Efficacy	0.721	0.565	0.334	0.969	0.293	0.167	0.439	0.578	0.313	0.436	0.537	0.752			
Facilitating Conditions	0.899	0.694	0.167	0.978	-0.076	0.236	-0.138	0.364	-0.088	0.082	-0.087	0.271	0.833		
Behavioral Intention	0.817	0.528	0.339	0.980	0.380	0.177	0.557	0.353	0.483	0.533	0.582	0.522	0.003	0.726	
Complexity	0.915	0.685	0.167	0.984	-0.173	0.182	-0.226	0.109	0.019	0.051	-0.165	0.106	0.409	-0.041	0.828

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« 2 °C Finance» and Green Bonds Challenges

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Abstract. Since the industrial revolution, the planet has experienced warming, and this has been scientifically proven by natural systems and particularly high anthropogenic greenhouse gas emissions between 2000 and 2010, which will lead to a warming of 3.7 °C to 4.8 °C by the end of the century. Therefore, extreme heat waves and risks related to water resource availability are expected. Rising sea levels, more intense storms, droughts, and floods threaten the world's poorest and most vulnerable population. The financial sector, a key sector, must certainly intervene by acting on the carbon footprint, which passes the level of capital allocation towards investments, favoring renewable energies and low co2 emissions. This is in line with the “2 °C finance”, which is compatible with the limited warming scenario. Green financial intervention involves the development of green bonds. The objective of our paper is to present the new concept of 2 °C finance, its role in ecological transition, and attempt to unveil the problems for the financial system to assess the carbon footprint. To this end, we present a new indicator: the indicator of co2 emissions avoided. Indeed, this indicator can be calculated to give the levels of co2 not emitted and the gain brought by the investments financed by the green bonds. For further implications, we suggest that future research focus on and empirically test the impact on 2 °C finance and the financial sector.

Keywords: Green finance · Finance 2 °C · Green bonds · CO2 emissions avoided

1 Introduction

The scientific community is unanimous regarding the scale of the climate and ecological crises. Faced with the urgency to act, an international will was carried out by the Paris Agreement in 2015, which resulted in the need to direct financial flows towards ecological investments in order to limit global warming below 2 °C. Finance, now at the heart of climate negotiations, has become aware of its responsibility to anticipate risks and support opportunities linked to ecological transition. However, this mobilization must be accelerated because the situation continues to deteriorate and the “cost of inaction” continues to increase. To achieve these objectives, climate issues must be properly integrated into the financial decision-making process, which requires redesigning the financial industry's tools. It is of paramount importance to develop harmonized and convergent climate risk measurement models that can be used by all economic and financial actors. The financial sector integrates sustainable development issues by referring to

environmental, social, and governance (ESG) criteria to analyze the impact of financing and investment activities on the real economy. Thus, players in the sector can register their activities in the transition to a low-carbon economy and play a driving role by redirecting financial flows in line with the Paris Climate Agreement and the United Nations Sustainable Development Goals, which is a challenge for sustainable finance. Thus the financial sector must certainly intervene by acting on the carbon footprint, especially at the level of capital allocation, which corresponds to “2 °C finance” compatible with the scenario of limited warming. Indeed, the question for donors is how a project is “beneficial to the climate and what evaluation criteria will be. On the one hand, you have to ask yourself to what extent the reduction in emissions from a project will contribute to the overall objective, that is, to limit global warming to 2 °C. Green financial intervention involves the development of green bonds. Through this research work, our contribution and to clarify the confusion between 2 °c finance and green finance, and also to make the distinction between “less CO₂” and “a level of CO₂ making it possible to limit the increase in the temperature at 2 °C. These concepts differ in terms of the objectives and plans for the tools used. We have also focused on a problem that has not been solved until now, that is the co₂ valuation problem, because in reality, it is almost impossible to attribute the 2 °C target to individual investments. Several attempts to evaluate and create indicators have been made, and our contribution is to take a closer look at the indicator of co₂ emissions avoided, and their interactions with green investments. The remainder of this paper is organized as follows. We started with the definition of a new concept, namely 2 °C finance, is distinct from green finance. Second, we present the roles of green bonds and the climate impact problem. Third, we present and rank the avoided emission indicators used to identify green investment. Finally, the conclusions are presented.

2 The «2 °C Finance»

Many financiers do not consider the climate when allocating capital for projects and investments, and they generally settle for financing projects that fit the risk/return profile that suits them [27]. Many are not interested in orienting their projects with a 2 °C trajectory “2 °C Finance” is an allocation of capital that minimizes the carbon footprint and limits the impact of climate change [5]. This allocation allowed a certain number of investments to be made, in line with the maintenance of the 2 °C trajectory. Owing to the complexity of the definition and magnitude of the assumptions required, estimating the scale of financing required for a +2 °C world is more art than science. Thus, financial resources must come not only from the public sector but also, to a large extent, from private actors. For finance to become “2 °C finance”, the compatibility of capital allocation with the development of low-carbon energy sources must be analyzed [26]. To reduce co₂ emissions, the amount of carbon emitted from investment must be reduced. The most difficult task is to measure the reduction in CO₂ emissions and identify the link with the emissions of green bonds. However, although everyone agrees on the disastrous consequences of global warming, the allocation of necessary capital remains inefficient for several reasons [20].

– Fossil fuels are least expensive.

- Renewable energy, which is used in energy, is expensive.
- The cost of renewable energy varies greatly depending on the country and region.

Policy guidelines are important for encouraging transitions. However, this varies across the countries. Several countries have encouraged the development of renewable sources of energy. However, many other countries continue to subsidize carbon-rich products, either directly or indirectly [14]. These subsidies were intended to protect the purchasing power of consumers. However, these sudden consequences include anti-environmental effects, particularly high energy consumption, which discourage the development of renewable energy sources. Despite the weak incentives for 2 °C financing, certain indications show that this new concept is beginning to develop, albeit slowly, but that there is growth [18]. With a clear focus on allocating capital in the right direction, especially with industries and companies that have realized the need to do business with respect to environmental conditions, with an achievable goal and a challenge to maintain and strengthen “2 °C finance” [17]. However, to encourage this, it is necessary to strengthen the “risk/return on investment ratio, which is more favorable. This can only be obtained by increasing the return and/or reducing risk. Increasing efficiency means minimizing the additional costs associated with CO₂ abatement or removing current subsidies for carbon emissions. Certainly, in the long term, the price of carbon should increase, which will favor low-carbon projects. In addition, the price of carbon should increase with the strengthening of climate policies and removal of subsidies. However, carbon pricing is a slow process [6].

During this process, returns can be improved by supporting low-carbon investments through mechanisms, such as feed-in tariffs. Consistent and sustained political commitment is essential, because politicians can send signals to grow markets and improve project performance.

3 Green Finance” or “2 °C Finance?

There are several reasons why “2 °C financing is not well known. One of them is the confusion of terms, definitions, and qualifications used in environmental and climate matters [13]. Thus, “green finance” is a concept different from “2 °C finance”. Even if the term “green finance” has existed for longer than “2 °C finance”, it also suffers from a problem of definition. In fact there is no widely accepted definition of what is called ‘green’, although some issues such as abatement are more obviously called environmental than others. Some green projects are compatible with promoting a +2 °C world (and vice versa) by limiting temperature and/or integrating resilience into impacts. However, this is not always the case in green finance. Beyond the links between numerous environmental and climatic themes (such as renewable energy and energy efficiency) and their similarities, the environmental and climatic factors are not identical [24].

A Green projects do not always contribute to meeting the 2 °C objective; the difference between the environment and the climate is difficult to identify, but climate change goes beyond environmental considerations and also concerns humanitarian areas, such as access energy, food security, and climate-related migration. Political factors, such as energy security, can influence climate change decisions.

The definition and lack of information on the contribution of projects to a small increase in temperature or preparation for the impacts of higher temperatures constitute additional problems [12]. Regardless of the problem of definition, ‘2 °C finance’ remains underdeveloped, and additional finance is needed to bridge the gap between today’s investments and those needed to embark on the path to change a world at +2 °C.

However, to achieve its objectives, 2c finance requires green finance instruments, namely good greens. These instruments are basic and effective tools for reducing the impacts of global warming.

3.1 Green Bonds and Climate Action

From a financial point of view, and on bond markets, green bonds are an effective tool that financiers have developed to contribute to the development of “2 °C finance” [17]. In recent years, global bond markets have raised large sums of financing in low-carbon, green economies.

Financing sustainable modes of transport (such as railways) and clean energy (such as renewable energy) are priorities. This type of specific bond, that is, green bonds, has developed rapidly over the past ten years. These green bonds are classic bonds, whose financing is explicitly allocated to a series of environmental and climate investment objectives. Emission growth is driven by both the supply and demand. On the supply side, the market has been helped by major international financial institutions committed to promoting green economy financing and aspiring to foster the mobilization of private capital. To this end, they resorted to issuing green bonds, thus contributing to creating a new market segment within the world’s main asset class [21]. These issuers initially made up of supranational organizations have expanded to include other public and para-public issuers (in particular, agencies and sub-sovereign entities) while, alongside these public issuers, other companies have begun to appeal to this market segment to raise funds and diversify their investor base and include environmentally sensitive institutions [9]. The demand for eco-responsible investment funds is growing and traditional institutions are interested in this new market segment. This development was made possible by an increase in the volume of issues and financial characteristics that were very similar to those of conventional bonds issued by the same institutions. In addition, a growing proportion of institutional investors have pledged to invest in a climate-responsible manner [29]. Thus, several groups in the Asia-Pacific, Europe, and North America have pledged to encourage investors to fully integrate climate change into investment practices and facilitate low-carbon investments by institutional investors. The United Nations Backed Principles for Responsible Investment have been adopted worldwide. One of the key commitments is to integrate ESG factors into the management of all the asset classes.

3.2 Green Bond and the Regulatory Problem

Currently, no legal regulations exist for green bonds or for the issuance of impact reports. Indeed, emissions are only framed by Green Bond Principles or associations, such as the Climate Bond Initiative [22]. Green bonds are a new determinant of sustainable green financing, energy-efficiency investments, and economic growth from a global perspective. Environmental Science and Pollution Research, 1–16. The Green Bond

Principles are a set of guidelines that guide issuers of green bonds. However, no entity was responsible for verifying the correct application of these recommendations. These guidelines recommend writing an impact report, which must be updated annually until all funds have been allocated [18].

This report must present at least the following information:

List of funded projects and descriptions of each project.

- Amount allocated to each project.
- Impact of various projects

When financing many projects, it is advisable to group them by sector (renewable energy, energy efficiency, green mobility, etc.) to facilitate the writing and reading of the reports.

For the environmental impact of projects, the Green Bond Principles recommends the use of qualitative and quantitative indicators with, in this case, a clear explanation of the method used for the calculation. Among the quantitative indicators mentioned, we found the following.

- Installed energy capacity.
- Amount of electricity generated.
- Avoiding greenhouse gas emissions.

Number of beneficiaries.

- Reduction in water consumption.
- A decrease in the number of vehicles on the roads.

It is recommended that a third party determines the green character of financed projects before issuing a green bond. Beyond the general transparency of reporting, it is interesting to emphasize the first level of transparency in the description of the funded projects. For example, investing in projects related to fossil fuels seems contradictory to the objective of a green bond despite the fact that it is possible to calculate positive environmental impact indicators (yield improvement projects, energy efficiency, etc.) [23]. The Green Bond Principles then defines a list of “green” sectors and projects. These practices were voluntary and mandatory. Therefore, it is important to examine these issuers’ actions.

4 Finance 2 °C and the Problem of CO₂ Assessment

It is useful for releasing fewer greenhouse gases in absolute terms, but the real challenge is to reduce greenhouse gas (GHGs) to a level that limits the temperature increase to 2 °C [1]. The distinction between “less CO₂” and “a level of CO₂ allowing the temperature increase to be limited to 2 °C” amounts to evaluating the absolute and relative reduction of emissions. A number of lenders seek to determine whether a project is climate beneficial. The methodologies used, different, have in common the justification

of the reduction of emissions linked to the project in its various forms (by generating less, by controlling emissions) and the process making it possible to determine whether the project is “additional” that is i.e. it guarantees an additional reduction [9]. If each project is evaluated based on its own merits, the distribution of capital is compatible with the world at +2 °C. It is relevant to determine the extent to which a project’s emissions reduction will contribute to the global objective and limit global warming to 2 °C. However, in reality, it is almost impossible to attribute the target of 2 °C to individual projects. Although it is difficult to estimate the investments to be made, it is even more difficult to assess the additional cost to make the investment compatible with a low-carbon economy [28]. Various organizations have attempted to quantify the costs of reducing emissions. Adaptation assessment is more accurate at regional and local levels. In 2010, the World Bank (2010) concluded that the cost of adapting to a 2 °C warmer world was \$70 billion to \$100 billion per year between 2010 and 2050, but that these “costs could be higher, once sectoral impacts are taken into account” [18] determined that clean energy investment policies to address the climate challenge and consistent with a 2 °C climate change goal would require more than \$800 billion per year. Thus, according to several studies, estimates indicate that there are many ways to calculate the cost of maintaining low temperatures and preparing for the consequences of climate change [8].

4.1 Avoided Emissions: An Important Climate Indicator

Many impact indicators are used and are often specific to certain sectors, such as the installed capacity and annual production for renewable energy projects. However, the volume of avoided emissions is by far the most common climate indicator in impact reports. Avoided emissions are climate impact indicators that are expressed in tons of CO₂ equivalents. This corresponds to the difference between the emissions induced by the project studied and those induced by a fictitious situation, called the reference situation, in which the project would not have been conducted [24]. The reference situation completely determines the result obtained, which is why it must be chosen in such a way as to be as credible as possible and consider changes over time (emission factors, improvement in efficiency, etc.). Avoided emissions were calculated and used in reports published by monetary authorities in several countries. We can conclude that calculating the avoided emissions linked to a green bond is now the norm and proof of seriousness and transparency on the part of issuers. Avoiding emissions is an effective way of measuring the environmental benefits of a project. It is also a common indicator that can be calculated for all types of projects and sectors [15]. However, the ratio of emissions avoided per million euros invested per year differs greatly from one green bond to another (from less than one ton of CO₂ avoided per million euros invested per year to more than 1,000 tons). Today, the absolute value of avoided emissions is probably not a criterion of choice for the majority of investors: the green bond market is booming and issues are mostly of the time largely oversubscribed [4]. The positive impact of a project is sufficient to attract investors. As advised by the Green Bond Principles, the vast majority of reports calculating avoided emissions contain an explanation of the methodology used. However, the level of detail varies from report to report.

- It is simple to note that briefly explains key assumptions.
- This is a detailed presentation of a method, which is sometimes explained in a separate report.

Market methods already exist in certain sectors, and are used by issuers. This is the case, for example, for the method used in the renewable energy sector or the SNCF-Réseau method in France, which was developed by the SNCF for the transport sector and is now used by several issuers [2]. However, not all renewable energy sources and transportation players use these methods. In general, the methods used lack detail and are transparent. For the construction sector, for example, no method seems to stand out today, and actors use their own methodology, which is not always well-detailed. Rigor in the method used may arise if it is not explained well. These methods may appear incomplete and demonstrate that they are not correlated with an increase in the calculation of avoided emissions. Thus, from the perspective of transparency and the performance of green bonds, external support to clearly define the calculation method can prove both urgent and beneficial [30] (Table 1).

Table 1. Avoided emissions: their methods, their advantages and disadvantages

	Avoided emissions
Definitions	Avoided emissions are thus a tool that allows companies to measure and value the contribution of their solutions to the reduction of GHG emissions
Methods	Principles for calculating avoided emissions: Basic principles: 1-A calculation of avoided emissions per action aims to compare two situations: - emissions without the action considered: reference situation - emissions with the action considered: assessed situation 2-define the action that can avoid emissions 3- the emissions of the entire life cycle are taken into account 4-the calculation of the avoided emissions of the system in reference 5 avoided emissions are calculated annually
Advantages	It gives the net difference between the reference situation (old) and the new assessed situation
Inconvenient	The calculation methods may vary according to the actors and the sectors of activity of the company

Source: author redaction

4.2 Effectiveness of Green Bond to Improve Climate Impact

The issue of investor confidence is central to the development of green bonds as an effective means of financing in the fight against climate change [25]. Fear of green washing (the dishonest use of the environmental argument in the communication of an actor) can dampen investors' enthusiasm for green bonds. Transparency on the environmental

impact of investments (with regard to climate change) is therefore necessary to validate the “green” character of the projects financed [10]. The role of greenhouse gas (GHG) emissions in climate change has been well established. Therefore, the ability of a project to avoid these emissions is an effective means to combat climate change. Quantification of avoided emissions is the main indicator for validating the positive impact of new projects. Thus, a large quantity of avoided emissions testifies to the good climate performance of the financed project, which contributes to building and maintaining investor confidence in the environmental strategy of the issuing entity [19]. Currently, investor demand for green bonds (and more broadly, for financial products with a positive impact on the environment) is stronger than supply. Thus, the implementation of a method for quantifying avoided emissions is more important than the value obtained. However, the supply of green bonds and “green” financial products is also increasing. Therefore, in the near future, indicators such as avoided emissions will become major criteria in the process of selecting these investors. Improving the climate performance of financed investments is the next step in the methodological development of these financing tools [3]. The implementation of a robust method for calculating avoided emissions contributed to this improvement. This quantification should make it possible to distinguish investments that appear similar at first sight but present a significantly different impact in reality. For example, investments in renewable energy projects in different contexts (e.g., geographical areas and energy types). Depending on the carbon content of the energy replaced by renewable energy, the impact in terms of avoided emissions will be different.

In the case of French emissions, two emitters using the same method on projects that are a priori comparable report very different avoided emissions related to investments [7]. Admittedly, the information generated on avoided emissions will be useful not only for judging the performance of the green bonds issued, but also for the selection of projects, which will improve the performance of future green bonds. This is ready in the future, when the market is more competitive. The introduction of this calculation method as soon as possible and in a favorable context is very important for future obligations and the development of the issuer’s climate strategy. The analysis of the reporting of green bonds issued worldwide in recent years reveals wide differences, both in terms of the values of emissions avoided and the calculation method used [16]. Some reports have presented incomplete or questionable methodologies that often lead to low impact figures. One cannot question the good faith of issuers in the choice of calculation method, but this choice and its justification appear to be essential for transparent and effective reporting. Calculation methods that differ in substance and complexity are often used depending on the investment sector. Different methodologies can be applied in the context of financing various projects using green bonds, and it can be difficult to find a way to offer solutions [11]. Some methods are prevalent in certain sectors, whereas others vary, such as in the real estate sector. It is important to select a calculation method adapted to the type of project financed that reflects the impact of green-bond financing as faithfully as possible, thus demonstrating a desire for transparency and continuous improvement. For some actors, it was preferable to develop a new methodology to better consider the specificities of financed projects (e.g., renovation of railways). These solutions and the proposed methods can constitute obstacles for the issuer, particularly

in the first issue. Some players, such as railway companies, have assisted in developing a reference methodology to assess the carbon impact of railway infrastructure investments. Therefore, a methodological guide was published to create a calculation standard for transport infrastructure projects (Table 2).

Table 2. Comparison between green finance and finance at 2 °C

	Green finance	Finance 2 °C
Objective	Financing public and private green investment in environmental goods and services and prevention of damage to the environment	Reduction of greenhouse gases
Policies	Financing of public policies that encourage the implementation of environmental and environmental damage mitigation or adaptation projects and initiatives	Assess emission reductions Integration of resilience
Instruments	Components of the financial system that deal specifically with green investment: financial instruments and structured green funds	Calculation of avoided emissions, sequestration of emissions, lower production of emissions, and controlled emissions
Targets	Energy efficiency, renewable energies, climate change adaptation, biodiversity protection, industrial pollution control	Reduce the impact of extreme temperatures, drought, storms, sea level rise

Source author redaction

5 Conclusion

Since the industrial revolution, the planet has experienced warming, which has been scientifically proven by natural systems and particularly high anthropogenic greenhouse gas (GHG) emissions between 2000 and 2010, which will lead to a warming of 3, 7 °C to 4.8 °C by the end of the century. Therefore, extreme heat waves and risks related to water resource availability are expected. Rising sea levels, more intense storms, droughts, and floods threaten the world's poorest and most vulnerable population.

The financial sector, a key sector, must certainly intervene by acting on the carbon footprint, which passes the level of capital allocation towards investments, favoring renewable energies and low co2 emissions. This is in line with the “2 °C finance”, which is compatible with the limited warming scenario. Issuers in the financial world continue to be involved in the green bond market, accompanied by progress in the availability and quality of impact reports. Given the green nature of green bonds, it is important to assess the overall environmental impact of new projects financed by these instruments. Green bonds already fulfill one of the objectives of “2 °C finance,” and they can help ensure that

capital is allocated to finance investments that adapt to new climatic conditions. However, reporting obligations should not be an obstacle to issuers embarking on green bonds. It is important to keep in mind that clear and transparent reporting is beneficial for issuers as it allows them to improve climate performance and strengthen investor confidence. This certainly goes hand-in-hand with the introduction of rigorous regulation of green bonds. It should also be noted that most of these bonds did not raise any controversy over fund allocation, which helped maintain investor confidence in the financial markets. However, some companies in the field of energy transition (renewable energy and recycling) use green bonds to finance the development of their activities, and do not target projects. Therefore, it is necessary to examine the use of funds linked to green bonds in the annual activity reports. It is important that clear and transparent reporting be beneficial for the issuer, allowing it to improve its climate performance and strengthen investor confidence. Therefore, to differentiate between green finance and 2 °C finance, indicators must be established.

Our contribution is to present a new indicator: the avoided emissions indicator. This is an essential indicator of the bond climate performance. Avoided emissions are a leading indicator of green-bond performance, whereas other indicators may provide useful information about the environmental impact of investments. It is also essential to choose a validated calculation method adapted to the projects and to clearly explain this method in the performance report. Thus, following a multitude of methods for estimating the carbon footprint of investments, harmonization of methods according to sectors, or the creation of market methods by sector that would be usable by all emitters will undoubtedly make it possible to simplify both reading and writing reports for investors. Issuers must not overcome the difficulty in creating new calculation methodologies.

For future implications, we suggest that future research empirically verify the effectiveness of indicators to quantify the effect and impact of green bonds on CO₂ emissions.

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IFRSs Adoption and Earnings Management, Earnings Persistence, and Value Relevance: Evidence from Selected Telecommunication Companies of Saudi Arabia

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Abstract. The focus of this research is to see if the quality of financial data from Saudi telecommunication companies has improved since the adoption of International Financial Reporting Standards (IFRSs) in 2017. The study assesses financial reporting quality using three metrics: Earnings Management, Earnings Persistence, and Value Relevance. The financial data was gathered over the previous ten years, which were divided into two periods: pre-adoption of IFRSs (2012–2016) and post-adoption of IFRSs (2017–present) (2017–2021). These figures were compiled from a variety of sources, including annual reports from selected companies and other websites. In this study, regression analysis was used to investigate the quality of financial information using Earnings Management, Earnings Persistence, and Value Relevance. According to the findings of this study, there was an improvement in the quality of financial reporting in Saudi Arabia following the mandatory adoption of IFRSs. In the post-IFRSs period, this study discovered an increase in Earnings Persistence and greater Value Relevance in the reported financials of selected Saudi telecommunication firms, indicating improved earnings quality. The study's findings, however, showed no evidence of improved financial reporting quality in the Earnings Management dimension. The findings will be used in future studies to better understand the benefits of adopting International Financial Reporting Standards (IFRSs). This research would also help regulators emphasise the importance of adopting IFRS as soon as possible. Because this study only used three criteria, Earnings Management, Earnings Persistence, and Value Relevance, it is suggested that other metrics be used to assess the effectiveness of presented financials.

Keywords: International Financial Reporting Standards (IFRSs) · Earning Management (EM) · Earnings Persistence (EP) · Value Relevance · Earning quality

1 Introduction

The International Accounting Standards Board (IASB) developed the International Financial Reporting Standards (IFRSs) as a single set of globally applicable accounting requirements that demand transparency and comparability in reported financial information to aid users of financial statements in making critical economic decisions [32]. Financial statements are produced in line with IFRSs to facilitate comparability between businesses and nations. Additionally, one of the most significant elements affecting the accuracy of financial statements is the effect of accounting standards on the calibre of accounting information provided by the company.

The quality of financial data was evaluated in the study using accounting- and market-based indicators. In this study, accounting-based criteria called earnings management (EM) and earnings persistence (EP) were employed to assess the accuracy of financial reporting (EP). Earnings management is the practise of management attempting to modify reported earnings using particular strategies, such as modifying accounting procedures to modify short-term earnings [2]. On the other hand, earnings persistence refers to a steady flow of money and revenue, which increases earnings predictability and, as a result, results in trustworthy valuation inputs [9].

As one of the largest telecom markets in the Middle East, this study focuses on examining the implications of IFRS adoption on the quality of financial statements for a few selected Saudi telecom companies. Additionally, numerous published works have looked at the standard of financial reporting following the implementation of IFRSs in many industrialised nations. However, because there have been no prior studies done to look at the quality of financial reporting in Saudi Arabia following the adoption of IFRSs, this study adds to the body of knowledge regarding the effects of implementing IFRSS on the reliability of financial statements in Saudi Arabia. Therefore, the primary research goals are to use Earnings Management, Earning Persistence, and Value Relevance to evaluate the quality of financial reporting of a chosen telecommunication corporation before and after its adoption of IFRSs.

2 Literature Review

The quality of financial reporting in many industrialised countries after the introduction of IFRSs has been the subject of numerous published studies. [8] measured Earnings Persistence, Timely Loss Recognition, Accruals, and Conditional Conservatism to assess the accuracy of financial reporting. Market-based and accounting-based metrics are the two categories into which these metrics fall [15, 29, 31]. While the Value Relevance dimension employed a market-based method to investigate accounting quality, Earnings Management and Earnings Persistence are accounting-based measures used to assess the quality of financial information in this study. However, earlier research discovered variations in the impact of IFRSS adoption on financial statement quality. [27] found that, generally speaking, the implementation of IFRSs did not raise the calibre of financial information in Europe and Brazil. [6] showed that the adoption of IFRSs by Spanish stock market operators had no impact on the usefulness of financial information. On the other hand, a number of studies have noted improvements in the calibre

of financial information as a result of IFRS implementation. According to [30, 32], the financial reporting quality of Indian listed businesses has improved in the phase after the implementation of IndAS, as evidenced by better Value Relevance as a market-based metric and improved Earnings Persistence. Additionally, [19] claimed that by limiting the application of Earnings Management in the UK, the adoption of IFRSs had enhanced accounting information. As a result, it is still unclear if the introduction of IFRSs has enhanced the calibre of financial reporting. Furthermore, no such study evaluating the calibre of financial information following the IFRSs' compulsion implementation has been done in Saudi Arabia. This study aims to close the gap by investigating the impact of adopting IFRSs on the quality of financial information provided by Saudi telecom companies.

[1] Using independent variables such company size, leverage, profitability, liquidity, and audit firm size, the study found an improvement in the quality of financial disclosures for Ghanaian listed companies when they adopted IFRSs. The adoption of IFRSs did not raise the calibre of accounting data in Europe or Brazil. The research's independent variables were earnings and cash flow persistence, conservatism, and earnings management. It is crucial to keep in mind, nevertheless, that the financial crisis that started in 2009 might have had an impact on how soon after the implementation of IFRSs companies were evaluated. [32] It was found that the adoption of Indian Accounting Standards increased the quality of financial reporting (IndASs). The study found that market-based models, which use value relevance as a market-based indicator, more accurately reflect the quality of accounting information for Indian listed companies than accounting-based models do. [33] used a variety of matrices, including Value relevance, Management earnings, financial performance, and accounting conservatism, to assess the validity of financial statements. There is evidence that IFRS adoption in Indonesia has raised the calibre of financial statements. The following topics were looked into: Value relevance, Management earnings, Financial Performance, and Accounting Conservatism [24]. Consolidated financial statements that have been prepared using IFRSs are more useful than those that have been presented using national regulations. The study finds that since the mandatory implementation of IFRSs, the calibre of consolidated financial statements has improved. Due to the implementation of IFRSs in Europe, the OECD Governance Principle of high-quality disclosure and transparency has been enhanced. The study also found that group accounts produced higher quality surplus than parent firm individual accounts once IFRSS adoption became required for consolidated financial reporting. [20], Only one of the four earnings management metrics yields a substantial result, the study's findings show. The study found in particular that financial reporting quality declined following the implementation of earnings management and timely loss recognition analysis, which helped accounting standards convergence with IFRSs. The study found that although there is a stronger link between accounting numbers and stock prices with the adoption of IFRSs, the quality of financial reporting has declined in terms of prompt loss recognition and earnings management. [28] It looked at the relationship between financial information opacity and idiosyncratic risk in stock returns. According to pre- and post-adoption IFRSs statistics, firm size has a significant impact on IFRSs effects in the UK. As a result, the quality of financial reporting for large companies in the UK has improved after the adoption of IFRSs. Furthermore, since the

IFRSs were implemented, the standard of financial reporting in France has not increased. [20], The study's conclusions indicate that the UK's adoption of IFRSs has raised the calibre of financial reporting because doing so has reduced the scope of earnings management and increased value relevance, both of which point to higher calibre financial reporting and aid investors in making decisions about their investments based on unbiased information. [6] examined the distinctions between SAS and IFRSs using important metrics and ratios (25 variables). The completed implementation of IFRSs in Spain did not demonstrate any improvement in the usefulness of financial information when compared using interim data. [1] used three criteria to compare the quality of accounting in Palestine before and after the adoption of IFRSs: earnings management, timely loss recognition, and value relevance; the results showed mixed results, with greater value relevance, less timely loss recognition, and more earnings management evidence. The accounting quality of Bombay Stock Exchange (BSE) firms in the year of adopting IFRSs was discovered to have greatly improved using Earnings Management indicators. [4, 5] found that the adoption of IFRSs increased the quality of financial information in Greece since there was less earnings management, greater value relevance, and earlier loss recognition. [16] determined that there is no indication of an improvement in accounting quality following the convergence to IFRSS in Brazil after using Earnings Management as a measurement technique to investigate the influence of Brazilian convergence to IFRSS on the quality of financial information. [23] found that after China adopted IFRSs in 2007, Earnings Management has dropped and Value Relevance has increased, indicating an improvement in the quality of accounting information.

H₁: Adoption of IFRSs in Saudi Arabia improves the financial statements quality of selected telecommunication companies.

3 Research Methodology

To evaluate the accuracy of financial information using the three criteria of earnings management, earnings persistence, and value relevance after the required adoption of IFRSs? The study uses qualitative analysis to learn more about the reliability of financial statements in Saudi Arabia after IFRSs were made required there. The secondary data used in this study includes things like annual reports. Saudi Telecommunication Company (STC), Etihad Etisalat Company (Mobily), Mobile Telecommunication Company of Saudi Arabia (Zain), and Etihad Atheeb Telecommunications Co. Made up the sample for this study (Go telecom). The data used for this analysis spans the most recent ten years, from 2012 to 2021.

3.1 Sample Construction and Data Collection

The sample for this study consists of four Saudi telecommunications firms that in the 2017 fiscal year prepared their maiden financial statements using the IFRSS. In addition to that, Saudi Telecom market is considered one of the largest telecom markets in Middle East. This study uses 10 years available data to examine the quality of financial information pre-adoption of IFRSs (2012–2016) and post-adoption of IFRSs (2017–2021). Financial data for the selected companies were derived from financial statements published on

the websites of these companies. Other websites that provided financial data such as financial statements, ratios, dividends, earnings, and other analysis related to the firm's performance and operations during the year were used to extract other financial elements related to the metrics used in analysing the quality of financial information. *Argaam and Investing.com websites* both are used in this study as a main source to perform this research as these two websites which provides the financial information as well as financial market news analysis.

3.2 Quality of Reported Financial Information

Earnings quality (EQ) reported as financial information which can be assessed using various metrics such as persistence, accruals, timeliness, and investor relevance [9, 10]. Accounting-based metrics and market-based metrics are the two types of metrics used to evaluate earnings quality [14]. Earnings management, Accruals quality, and earning smoothness are the most popular accounting-based metrics, according to previous research. While value relevance and asymmetric timeliness are the most popular market-based metrics [12, 32]. Three earnings quality criteria will therefore be used in this study, as they have in prior ones: Earnings Management (EM), Earnings Persistence (EP), and Value Relevance (VR).

3.3 Earnings Management

One of the often utilised criteria in earlier research to assess the accuracy of financial information given is earnings management. As a result, it is anticipated that IFRS adoption will limit the application of earnings management and improve the calibre of financial statements. The modified [17, 21] model has been utilised in this study to assess the level of financial information quality utilising this dimension.

For each year and company, the earnings management model is estimated as follows:

$$ADA_{it} = \alpha_i + \beta_1 \frac{1}{TA_{i,t-1}} + \beta_2 \frac{(\Delta Rev_{it} - \Delta Rec_{it})}{TA_{i,t-1}} + \beta_3 \frac{PPE_{it}}{TA_{i,t-1}} + \varepsilon_{it} \quad (1)$$

where:

ADA_{it} : The absolute value of the firm i's discretionary accruals in year t is known as ADA. Total accruals less non-discretionary accruals equal discretionary accruals.

$TA_{i,t-1}$: Company I's total assets at time t-1.

ΔRev_{it} : The variation in revenues from year t to year t minus 1.

ΔRec_{it} : The difference between year t and year t minus 1 in receivables.

PPE_{it} : The value of the company I's property, plant, and equipment in the specified year.

3.4 Earnings Persistence

By delivering accurate and timely data that can be utilised to value businesses and assess management's performance, the financial reporting system should satisfy the needs of those who use financial statements [34].

Earnings Persistence is examined using Sloan (1996) model as follows:

$$EPS_{it} = \beta_0 + \beta_1 IFRS_t + \beta_2 EPS_{it-1} + \beta_3 IFRS_t * EPS_{it-1} + \varepsilon_{it} \quad (2)$$

where:

EPS_{it} : stand form company's earning per share (EPS) for the t year.

$IFRS_t$: A dummy variable that is coded as one after the implementation of IFRSs and 0 before.

For β_3 variable, if the coefficient is significant and positive after the adoption of IFRSs this indicates that earnings are more persistent and thus will result in better quality in earnings.

3.5 Value Relevance (VR)

Value relevance refers to the capacity of financial information to identify and reflect information that establishes the firm's value [14, 18]. Adopting IFRSs is therefore anticipated to have greater value relevance, which will improve the quality of financial information reported.

By regressing stock prices on book value of equity and earnings, the price earnings model has been utilised [25]. The following estimate is made for the linear regression model:

$$MPS_{it} = \beta_0 + \beta_1 IFRS_t + \beta_2 EPS_{it} + \beta_3 IFRS_t * EPS_{it} + \beta_4 BVPS_{it} + \beta_5 IFRS_t * BVPS_{it} + \varepsilon_{it} \quad (3)$$

where:

MPS_{it} : At time t, the market price per share of the business I.

EPS_{it} : Earnings Per Share (EPS) for business I at time t.

$BVPS_{it}$: Company i's book value (BV) per share at time t.

$IFRS_t$: dummy variable with a pre-IFRSs adoption code of zero and a post-IFRSs adoption code of one.

4 Data Analysis and Interpretation

Microsoft Excel was used to analyse the data collected in order to determine the effect of implementing IFRSs on the calibre of financial information. The quality of financial information has been investigated using three metrics: Earnings Management, Earnings Persistence, and Value Relevance. Regression analysis was used to analyse the data acquired for this inquiry.

Earnings management refers to the management's attempts to adjust reported earnings through the employment of specific tactics, such as changing accounting practises to affect short-term profitability [2, 22]. High-caliber financial reporting is measured using reduced earnings management [20].

Table 1 shows the results of model (1) showed that the coefficient for IFRSs is not significant as the P-value for IFRSs is 0.733 which is greater than the significance level; This stated that despite Saudi Arabia adopting IFRSs, Earnings Management

Table 1. Regression analysis of model (1)

Regression statistics	
Multiple R	0.1173
R ²	0.0138
Adjusted R ²	0.0990
Standard error (SE)	0.0209
No. of observations	40

procedures have not changed. Additionally, the results revealed that the total fluctuation of independent factors accounts for 1.38 percent of the variation in discretionary accruals ($1/TA$, $\frac{(\Delta Rev_i - \Delta Rec_i)}{TA}$, PPE/TA, and dummy variable IFRSs).

Table 2. Regression coefficients of model (1)

	Coefficients	Standard error (SE)	T-state	P-value	Lower-95%	Upper-95%
Intercept	0.035	0.011	3.180	0.003	0.013	0.057
$\frac{(\Delta Rev_i - \Delta Rec_i)}{TA_{i,t-1}}$	2432.740	20893.687	0.116	0.908	-39983.701	44849.180
1/TA	-0.052	0.197	-0.263	0.794	-0.451	0.348
PPE/TA	-0.010	0.028	-0.358	0.723	-0.066	0.046
IFRSs	-0.002	0.007	-0.344	0.733	-0.016	0.011

*significance level is 5%.

The findings of model (1) are represented in Table 2. The results of model (1) showed that the coefficient for IFRSs is not significant as the P-value for IFRSs is 0.733 which is greater than the significance level; this indicates no change in the practices of Earnings Management after the adoption of IFRSs in Saudi Arabia. In addition, the findings showed that 1.38% of variation of Discretionary Accruals is explained by the combined variation of independent variables ($1/TA$, $\frac{(\Delta Rev_i - \Delta Rec_i)}{TA}$, PPE/TA, and dummy variable IFRSs).

4.1 Earnings Persistence

Presence of earnings persistence refers to a consistent flow of cash and income, which improves the predictive capacity of earnings and, as result, leads to reliable valuation inputs [9]. Accordingly, earnings quality will be high if earnings become more persistent.

Table 3 illustrates the model (2)'s results. According to model (2)'s findings, the fluctuation in the independent variables IFRSs, EPS, and IFRSs*EPS together account for 61.08 percent of the variation in earnings per share. Additionally, because the P-value for the variable was below the significance level, the coefficient for IFRSs*EPS is

Table 3. Regression analysis of model (2)

Regression statistics	
Multiple R	0.782
R ²	0.611
Adjusted R ²	0.578
Standard error (SE)	2.070
No. of observations	40

Table 4. Regression coefficients of model (2)

	Coefficients	Standard errors	T-state	P-value	Lower 95%	Upper 95%
Intercept	0.804	0.471	1.709	0.096	-0.150	1.759
IFRSs	-0.581	0.677	-0.858	0.397	-1.954	0.793
EPS	0.452	0.091	4.961	0.000	0.267	0.637
IFRSs*EPS	0.534	0.197	2.709	0.010	0.134	0.934

* significance level is 5%.

positive and significant, indicating that earnings are more persistent after the adoption of IFRSs in Saudi Arabia and that earnings quality has improved since the adoption of IFRSs in the Kingdom of Saudi Arabia (Table 4).

4.2 Value Relevance

Value relevance is considered as market-based approach of evaluating earnings quality of financial information [32]. Accounting information become relevant only if this financial information is capable of influencing financial statements users' decisions.

Table 5. Regression analysis of model (3)

Regression statistics	
Multiple R	0.933
R ²	0.871
Adjusted R ²	0.852
Standard error (SE)	12.211
No. of observations	40

Table 5 shows 87.07% of variation of Market per Share is explained by the combined variation of independent variables (IFRSs, EPS, IFRSs*EPS, BVPS, and IFRSs*BVPS).

Moreover, coefficient IFRSs*EPS is positive and significant as the P-value for the variable was less than the significance level, which indicates that Value Relevance has improved after the adoption of IFRSs in Saudi Arabia thus will result in better earnings quality post-IFRSs adoption period. EPS coefficient is significant and positive which indicates generally higher value relevance of earnings reported. In addition, the results showed that IFRSs*BVPS is not significant which indicates that no change in its Value Relevance after the adoption period of IFRSs in Saudi Arabia. In addition, the results showed that BVPS variable is insignificant as P-value of the coefficient is higher than the level of significance (Table 6).

Hence, hypothesis (H₁) accepted and denotes that the mandatory adoption of IFRSs in Saudi Arabia will improve the financial statements quality of Saudi Telecommunication companies.

Table 6. Regression coefficients of model (3)

	Coefficients	Standard error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	30.998	4.567	6.787	0.000	21.716	40.280	21.716	40.280
IFRSs	-23.330	8.319	-2.804	0.008	-40.236	-6.423	-40.236	-6.423
EPS	5.832	0.777	7.506	0.000	4.253	7.411	4.253	7.411
IFRSs*EPS	5.977	1.411	4.236	0.000	3.109	8.845	3.109	8.845
BVPS	-0.035	0.110	-0.322	0.749	-0.259	0.188	-0.259	0.188
IFRSs*BVPS	0.688	0.346	1.986	0.055	-0.016	1.392	-0.016	1.392

*significance level is 5%.

5 Conclusions and Suggestions

This study has been done to examine the effects of Saudi Arabia's required adoption of IFRSs on the calibre of financial reporting by Saudi telecommunication companies. Three metrics—Earnings Management, Earnings Persistence, and Value Relevance—have been used to assess the calibre of financial information. The study has concentrated on determining whether the telecommunication company's financial information has less Earnings Management practises, more Earnings Persistence, and more Value Relevance as a result of the adoption of IFRSs. These three factors are all indicators of superior earnings quality.

The results of this study have demonstrated that the adoption of IFRSs improved the accuracy of the financial data provided by Saudi telecom companies. The study demonstrated increased Earnings Persistence and an increase in Value Relevance in the reported financials of Saudi telecommunication companies in the post-IFRSs period, clearly indicating an improvement in earnings quality in these two dimensions. As the Profits Management procedures remained unchanged following the adoption of IFRSs

in Saudi Arabia, the research results did not reveal any indication of improved earnings quality in this area. Previous studies have similarly discovered an improvement in reported financial data quality in the post-IFRS era [3, 7, 11, 13]. A number of academic studies, however, have not discovered any improvement in the calibre of financial information following the implementation of IFRSs [6, 18, 26].

5.1 Suggestions for Further Research

Since this study solely evaluated the quality of financial information, the effects of IFRSs on both financial and non-financial information quality were investigated. Additional measures can be utilised to examine the impact of IFRS adoption on the quality of financial information since this research only looked at three of them: earnings management, earnings persistence, and value relevance. Market-based or accounting-based methods can both be used to evaluate the value of financial information. It is necessary to evaluate the amount of financial information in these countries, especially in those that have just recently embraced the IFRSs, like Saudi Arabia, as there have only been a few studies in this field in the Arab region and GCC nations. The consequences of adopting IFRSs in the Arab region and GCC countries should be examined on a larger sample to achieve better findings, as this research only chose the Saudi Arabian telecoms industry, which is composed of only four companies.

Future studies in this area will be conducted within the borders of the Saudi Arabian kingdom, and a good place to start would be to assess the level of financial data after the country's obligatory adoption of IFRSs. However, there are certain limitations to this study that could affect the outcomes. First, despite the fact that a bigger sample would have been more appropriate, this study picked a small sample of just four Saudi Arabian telecommunications companies to examine the accuracy of financial reporting before and after the application of IFRSs. Additionally, only three metrics—earnings management, earnings persistence, and value relevance—have been used to measure the quality of financial information, which is one of the study's potential limitations because it is advised to use additional metrics in addition to these ones for better outcomes.

Other researchers in Saudi Arabia including GCC may use this study as a jumping-off point for further investigation in the same area. Instead of using the three metrics employed in this study, Earnings Management, Earnings Persistence, and Value Relevance, they can examine the effects of IFRS adoption on the quality of reported financials using a larger sample and carry out these studies using additional metrics to increase the accuracy of the results. Other measures, like Timely Loss Recognition, Conditional Conservatism, and Earnings Response Coefficient, can be utilised in addition to the ones used in this study to evaluate the accuracy of financial data.

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Impact of Corporate Governance on Financial Performance: Empirical Evidence of the Selected Telecommunication Companies of GCC

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Abstract. The impact of corporate governance (CG) on a company's financial performance (FP) has been acknowledged by researchers and accounting experts. Studies on the effects of corporate governance frameworks on business performance usually ignore the possibility that directors can inflate reported profitability in an effort to achieve a variety of objectives. This study explores the relationship between corporate governance on corporate financial performance of selected telecommunication companies in GCC. The selected GCC telecoms companies' annual reports and Thomson Reuters were utilised to collect the data, which was analyzed using univariate OLS multiple regressions. The data collection period included 2012 to 2021. According to the study's findings, when performance is taken into account along with managers' opportunistic tendencies, the effect of corporate governance on financial performance is negligible. It is advised that rather than placing more emphasis on the proportion of independent directors to total board members, the appointment of independent directors should be based on the historical performance of such directors. This study will aid in the understanding of the impact of CG on FP by academics, accountants, regulators, and policymakers.

Keywords: Corporate governance · Financial performance · Board size · Audit committee independence · Board gender · Board independence

1 Introduction

Global corporate catastrophes, like Worldcom and Enron from US, Wirecard from Germany, Luckinn Coffee from China, and others from across the world, have highlighted the importance of quality of financial reports. The boards of directors and senior executives have primary responsibility to produce the reliable financial reports which reflect true and fair view of enterprise. The serious disadvantages of decision-making concentration and unprofessional work ethics at the senior management level [12, 16]. Financial economists and accountants have observed that the primary reason for many corporate failures is a lack of thoroughness in the accounting rules and management frameworks

that generate the financial statement. To prevent such future regulatory failures, most governments throughout the globe have set new standards for advocating corporate governance procedures that match executives' objectives to enhance wealth of the shareholders in sustainable manner. The research concentrates on the relevance of corporate governance characteristics such as Audit Committee Independence, board independence (Composition) and, broad size, Board Gender Diversity because these variables affect business performance based on past research.

2 Literature Reviews

Much past research [3, 9, 10, 15] indicates the connection between corporate governance characteristics and corporate performance. In addition, these studies contributed to enhancing understanding of the impact of this association. According to [5], corporate governance has aided the organization in improving operational performance. Companies with better corporate governance will have an advantage and outperform companies with inadequate corporate governance in terms of operational performance. Besides, excellent corporate governance is expected to enhance investor confidence. According to other studies, inferior corporate governance relates to a greater chance of insolvency.

2.1 Board Size

According to Bredart [4], the board size that selects legal protection is noticeably various from that of other enterprises, in this manner, in the situation of financial hardships, governance considerations and board size have a favorable (positive) influence on business performance. Besides, [7, 12] studied for three years on ten insurance enterprises found the positive impact of these variables such as Leverage, Board Gender Diversity (Board in Women), and Firm Size.

H₁: The performance of a company is positively correlated with the size of the board.

2.2 Audit Committee Independence

The effectiveness of the monetary role of the board depends on the number of times meets during the year by the audit committee. Due to studies done by Ahmed and Hassan (2012), conclude that may be completely based on a range of meetings [1, 9, 11]. As a result, it is anticipated that there will be a negative association between it and profit manipulation, and most definitely a relationship with performance within a pre-controlled budget.

H₂: The performance of the company and the independence of the audit committee are positively correlated.

2.3 Board Gender Diversity

The rate of female CEOs on boards (% of women) has been used in several research papers to measure changing gender diversity [10, 17]. According to [14] gender diversity,

in particular, has received a lot of attention recently, because of the growing desire for legislation in many industrialized nations to ensure that women have greater and equal participation in corporate directors.

H₃: There is a positive relationship between Gender Diversity and Firm Performance.

2.4 Board Composition (Independence)

Board composition refers to the number of directors on the board, their mix of executive and non-executive (independent) roles, and other desired qualities like gender diversity [8]. It is believed that companies with a high percentage of outside directors on their boards have fewer agency issues, which results in a better alignment of management and shareholder interests [6, 15].

H₄: There is a positive relationship between Board Independence and firm performance.

3 Research Methodology

This study is a correlative examination linking corporate governance styles such as board size, board composition, gender diversity in the board, and degree of audit committee governance to pre-managed business performance. To attain this purpose, explanatory factors must be connected to (3) dependent variables: ROA, ROE, and EPS. The sample consisted of five telecom companies listed in the GCC countries from 2012 until 2021. The selection of a sample of companies was influenced by the availability of data from the business sample for all variables included in the model. All data was gathered from the annual reports of the firms listed and Thomson Reuters.

Table 1. Dependent variable definition and measurement

Variable	Description
ROA [Y1]	Return on assets
ROE [Y2]	Return on equitu
EPS [Y3]	Earning per share

Table 1 shows dependent variables: ROE, EPS, and ROA [1, 4, 13]. These financial metrics are used in a variety of empirical research to assess the association between corporate governance (CG) and business performance. According to the study conducted by [9], These metrics are applicable to both accounting and market metrics. Accounting procedures such as ROA and ROE are the most common variables in previous corporate governance research [4].

As illustrated in Table 2, The control variables, which are used to account for the likelihood of their impact on the dependent variables of the sample firms, are presented alongside the corporate governance variables and their proxies. In addition to simple multiple

Table 2. Explanatory variable definition and measurement

Variable	Description
BI [X1]	Board independence (Composition)
BS [X2]	Board size
AI [X3]	Audit committee independence
BG [X4]	Board gender diversity
FS [D1]	Firm size
Leverage [D2]	Leverage

regression, which attempts to identify a mathematical correlation across variables. The univariate multiple regression equation model is:

$$Y_{1-3} = \alpha_0 + \alpha_1 X_{1it} + \alpha_2 X_{2it} + \alpha_3 X_{3it} + \alpha_4 X_{4it} + D_1 + D_2 + \varepsilon_{it}$$

where Y1–3 are the dependent variables of ROE, EPS, and ROA. α_0 is the intercept, α_{1-4} is the coefficient of the independent variables, X1, X2, X3, and X4 are the independent variables of BS, BI, BG and AI score respectively, D1 and D2 are the control variables of FS and leverage while the ε is the regression residual.

4 Data Analysis and Interpretation

The findings of the study are outlined and discussed in this section. The presentation of the descriptive statistics is followed by the presentation of the regression results.

Table 3. Descriptive statistics (Dependent Variables)

Statistics			
	ROA	ROE	EPS
N	5	5	5
Mean	.58710	1.23459	7.51800
Std. deviation	.330484	.598169	6.722014
Minimum	.263	.486	1.540
Maximum	1.001	1.927	15.690

Table 3 result reveals that the average signed ROA is 0.58710 which can be changed with a standard deviation of around .330484. Additionally, this average is ranging between 0.263 and 1.001. However, in general, some telecommunication companies suffer from some shortcomings when it comes to the formation of net income, as the minimum ROA is 0.263%. Although, this value was affected by the negative numbers of

some companies, and this will lead to companies being less profitable compared to the rest of the companies that make a positive ROA. Furthermore, it sustained a \$0.263 gain for every \$1 spent on the firm's assets, indicating that the company does make effective use of its resources. Further, the value of the reported ROE is 1.23459, ranging from 0.486 to 1.927 with a standard deviation equal to 48.9%. So, the higher the ROE, will lead to more investments drawn into the business, the higher the provider of capital that enhances operations in the company will be and the more benefits will be enjoyed by the shareholders. The value for all the years from 2012 to 2021 of EPS that calculates a company's market profit, which is 7.51800 and confined between 1.540 to 15.690. It was also noted that the average minimum to EPS in most years was a negative sign, which affected it and made it small amount as well and this will lead to reducing the profit of the firm.

The results demonstrate that there is a positive relationship between CG and reporting financial performance as the manipulation leads to enhancing the image of the firms.

Table 4. Descriptive statistics (Explanatory Variables)

Statistics	BS	BG	BI	AI	FS	Leverage
N	5	5	5	5	5	5
Mean	104.2	.20455	5.41764	5.97857	237.04448	4.73427
Std. deviation	10.917875	.326989	1.056593	3.363010	4.921622	1.243360
Minimum	86.000	.000	3.866	.476	231.164	2.833
Maximum	114.000	.750	6.688	9.333	241.919	6.167

Table 4 is the summary statistics of the explanatory variables for the years 2012 to 2021. The value of size board is ranging 104.200 in the ten years with the minimum of 86 and a maximum of 114. The result indicates that there is a strong presence of independent and dependent directors on the board of directors of the sample firms. Board Gender Diversity the average for the ten years in overall is 0.20455, ranging from the extreme values of 75% of total equity ownership. The average of the Audit Committee Independence score of the sample firms is 5.97857 that ranging from .476 to 9.333 while the board independence average 5.41764. Further, two variables were selected as control variables which are firm size and leverage with averages of 237.04448 and 4.73427 respectively.

The correlation matrix Tables 5 show the relationship among all explanatory variables in the study model for the consolidation ten years from 2012 to 2021. The result reveals that the board size is positively correlated with two of the control variables during the ten years which are firm size and leverage. In addition, the relationship between firm size and leverage is positively correlated with the leverage since the larger the size of the company, the more loans and leverage it takes, so this positive relationship between them resulted. Moreover, the board size is moderate negatively correlated with the board gender diversity at 1% significant level.

Table 5. Correlation matrix

Correlations		ROA	EPS	ROE	BS	BG	BI	AI	FS	Leverage
ROA	Pearson Correlation	1								
	Sig. (2-tailed)									
EPS	Pearson Correlation	0.005	1							
	Sig. (2-tailed)	0.994								
ROE	Pearson Correlation	.922*	-0.124	1						
	Sig. (2-tailed)	0.026	0.842							
BS	Pearson Correlation	0.273	0.252	0.215	1					
	Sig. (2-tailed)	0.657	0.682	0.728						
BG	Pearson Correlation	0.144	-0.662	0.313	-0.769	1				
	Sig. (2-tailed)	0.817	0.224	0.608	0.129					
BI	Pearson Correlation	-.937*	-0.002	-0.739	-0.189	-0.1	1			
	Sig. (2-tailed)	0.019	0.998	0.153	0.761	0.873				
AI	Pearson Correlation	0.12	0.749	-0.062	0.797	-.958*	-0.135	1		
	Sig. (2-tailed)	0.848	0.145	0.922	0.106	0.01	0.828			
FS	Pearson Correlation	0.578	0.499	0.67	0.593	-0.337	-0.326	0.537	1	
	Sig. (2-tailed)	0.308	0.393	0.216	0.292	0.579	0.593	0.35		
Leverage	Pearson Correlation	0.214	0.354	0.313	.882*	-0.636	0.012	0.691	0.814	1
	Sig. (2-tailed)	0.73	0.558	0.608	0.048	0.248	0.985	0.197	0.093	

*Correlation is significant at the 0.05 level (2-tailed)

4.1 ROA Link with Explanatory Variables

As it is observed from the table above that ROA and board size has, the relationship between these two variables is a positive one and has a coefficient of 0.3894, and this number indicates that the greater the number of members of the managers in the company, the greater the returns from the assets that the company will receive. Besides, it has a 0.144 coefficient. Furthermore, for the audit committee independence had a positive association with ROA and having 0.120 the value of correlation which means more of the audit committee independence result in more in the ROA. While for the board

independence (Board Composition) has an inverse association in regard to return of assets this means that the ROA ratio decreases with the increase in the independence of the board and will have a coefficient of -0.298 .

4.2 ROE Link with Explanatory Variables

The relationship between ROE and BS is a direct association and this is inferred from the positive value of the correlation which is equal to 0.215 . This is evidence that the more the size of the board leads to the rise in the returns on equity. Besides, the reference to gender diversity in the council has a positive connection with this dependent variable and has the value of the coefficient of 0.313 , thus both variables grow in the same direction together as well as reduced. While for the audit committee independence through the data shown in the table, it was concluded that ROE found a negative correlation with the audit committee independence and board independence with a correlation of -0.062 and -0.739 respectively.

4.3 EPS Link with Explanatory Variables

The link between EPS and BS and AI is positive and has a coefficient of 0.215 and 0.749 orderly indicating that the bigger the number of members of the management team, and audit committee in the firm, the better the EPS that the company will earn. However, gender diversity and board independence has an inverse connection with ROE the value of coefficient -0.662 and -0.002 orderly, this indicates that the EPS ratio diminishes as gender diversity rise (Table 6).

4.3.1 ROA is the Dependent Variable (ROA Regression)

Table 6. ROA model summary

Model	R	R-Square	Adjusted R square	S. error of the estimate
1	.728a	.529	.059	.320622

a. Predictors: (Constant), Leverage, FS, BS, BG, BI, AI

As stated in the figure ahead, the adjusted R^2 result of 0.059 , indicates that the factors employed in this study exemplify 5.9% of the variation in operational performance. The remaining 94.1% is described by factors external to this research. Hamdan, and Ahmed (2015). The figure is less than fifty percent, which is aligned with the ex-research on the subject.

Table 7. ROA ANOVA table

Model	Sum of squares	df	Mean square	F	Sig
Regression	.231	2	.116	.125	.0471b
Residual	.206	2	.103		
Total	.437	4			

a. Dependent Variable: ROA

b. Predictors: (Constant), Leverage, FS, BS, BG, BI, AI

Table 7: the result of the F-value as it appears in the schedule is equal to 0.125 and 0.0471 for the P-value reflecting relevance in the association across the averages of variables.

Table 8. Regression results and ROA is the dependent variable

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. error	Beta		
1	(Constant)	-17.529	12.463		-1.406	.295
	FS	.080	.056	1.198	1.434	.288
	Leverage	-.203	.222	-.762	-.912	.458
	BG	.279	.498	.276	.132	.917
	BS	.811	.177	1.323	1.385	.398
	BI	-.264	.667	-.843	-3.425	.181
	AI	.005	.521	.005	.005	.997

a. Dependent Variable: ROA

Table 8 presents the results of multiple regression analysis for the consociated ten years where absolute return on asset (ROA) is the dependent variable. The results demonstrate that BS is positively related with opportunistic accounting in the study period. Also, the board size is insignificant related with performance at 5% significant level. Therefore, H₁ is accepted. The relationship between board gender diversity and the ROA has also been revealed to be positive.

A positive association between AI score and ROA has emerged through the study period. Furthermore, the impact is robust at 1% significant level. This association is incompatible with hypotheses stated “H₂: *There is a positive relationship Audit committee independence and firm performance.*” Then, H₂ is accepted. It is also perceived that the relationship among BI and ROA is economically significant. Moreover, this relationship has been revealed to be negative. The impact of FS and the leverage on performance is not robust as the statistics recorded and the result found that a negative relationship for the leverage while the relationship is positive for the FS.

4.3.2 ROE is the Dependent Variable (ROE Regression)

Table 9. ROE model summary

Model	R	R square	Adjusted R square	Std. error of the estimate
1	.781a	.610	.219	.528570

a. Predictors: (Constant), Leverage, FS, BS, BG, BI, AI

Table 9 shows the Adjusted R^2 is 0.291 in the table, indicating that the variables engaged in this analysis describe 29.1% of the diversity in financial success, although the remaining 70.9% is represented by elements outside the model. Furthermore, the proportion is “<50%”, which is aligned with another research (Velnampy, 2013) (Table 10).

Table 10. ROE ANOVA table

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	.872	2	.436	1.561	.390b
	Residual	.559	2	.279		
	Total	1.431	4			

a. Dependent Variable: ROE

b. Predictors: (Constant), Leverage, FS, BS, BG, BI, AI

The result of the F-value as it appears in the ANOVA model is equal to 1.561 and 0.390 for the P-value reflecting relevance in the correlated across the averages of variables.

Table 11 above is the summary of consolidated ten years regression results where the impact of corporate governance on ROE is examined. The coefficients of BS are positive which is consistent with the hypotheses mentioned earlier that state “ H_1 : BS related with firm performance positively”. Therefore, the H_1 is accepted. However, it is not statistically significant when ROE is considered. This implication of this is a high extent of directors associates positively with the firm performance. The relationship between BG and ROE in this case is positive. However, it is not significant when ROE is the explained variable. The study results support the hypotheses assumed and generated in the literature review which stated “ H_3 : BG related with financial performance positively.” Therefore, the H_3 is accepted. The relationship between AI strength and ROE, the study documents negative but insignificant relationship between the two in both regressions. Therefore, there is no statistical evidence to establish the influence of audit committee and performance regardless of the performance measure.

According to the influence of BI on the ROE, board independence appears to have negative and insignificant influences on ROE measures. Thus, the higher the BI the lower the ROE of the firm which is compatible with the hypotheses that assumed that “ H_4 : BI related with financial performance positively.”. Therefore, the H_4 is rejected. The

Table 11. Regression results and ROE is the dependent variable

Coefficients						
Model		Unstandardized coefficients		Standardized coefficients	T	Sig.
		B	Std. error	Beta		
1	(Constant)	−32.704	20.547		−1.592	.252
	FS	.150	.093	1.233	1.619	.247
	Leverage	−.332	.366	−.691	−.908	.460
	BG	1.251	.498	.684	.868	.545
	BS	.354	.177	.526	.379	.770
	BI	−.331	.667	−.585	−.848	.552
	AI	−.547	.521	−.473	−.653	.632

a. Dependent Variable: ROE

FS which is one of the control variables that reveals a positive insignificant relationship with ROE. In contrast, leverage shows a negative significant relationship in case of ROE at 5% significant level.

Overall, the adjusted R^2 value is 21.9% in the case of ROE which means that CG variables explain the ROE to the extent of 21.9%, while 78.1% Other factors not incorporated in the model explain the variation in the ROE. The F-statistic values are 1.561 in along with an insignificant relationship as the p-value is 39%.

4.3.3 EPS is the Dependent Variable (EPS Regression)

Table 12. EPS model summary

Model	R	R square	Adjusted R square	Std. error of the estimate
1	.506a	.257	−.487	8.196825

a. Predictors: (Constant), Leverage, FS, BS, BG, BI, AI

Table 12 demonstrated the adjusted R^2 findings of -0.487 the negative sign means there is a small or non-existent relationship. As a result, the negative sign denotes the insignificance of explanatory factors. The proportion is less than fifty percent, which is consistent with a previous study on the issue [2] (Table 13).

Table 13. EPS ANOVA table

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	46.366	2	23.183	.345	.743
	Residual	134.376	2	67.188		
	Total	180.742	4			

a. Dependent Variable: EPS

b. Predictors: (Constant), Leverage, FS, BS, BG, BI, AI

The result of the F-value as it appears in the ANOVA model is equal to 0.345 and 0.743 for the P-value which is more than 5% significant. As a result, the association between these factors is not significant, and EPS is still not regarded a strong predictor of company success, which is consistent with past findings [13].

Table 14. Regression results and EPS is the dependent variable

Model		Unstandardized coefficients		Standardized coefficients	T	Sig.
		B	Std. error	Beta		
1	(Constant)	-9.407	8.627		-.598	.611
	FS	.852	1.435	.623	.593	.613
	Leverage	-.829	5.680	-.153	-.146	.897
	BG	-24.346	.498	-1.803	-2.096	.283
	BS	.049	.177	.100	.049	.969
	BI	-2.927	.667	.460	.301	.814
	AI	.836	.521	.998	1.522	.370

a. Dependent Variable: EPS

Table 14 illustrate the summary of regression result where the impact of EPS is examined. The relationship between board size and EPS in this case is positive. However, it is not significant when EPS is the explained variable. The study results compatible with the hypotheses mentioned earlier which stated “H₁₋₁: Board size related with firm performance positively”. Therefore, the H₁₋₁ is accepted.

However, the impact is robust only when reported performance is the explained variable. Thus, the study supports the hypotheses assumed previously which argued that “H₂: AI related with financial performance positively”. Therefore, the H₂ is accepted.

According to the influence of BG on the EPS, board gender diversity appears to have insignificant influences on the performance measures and have a negative association with ROE. Therefore, the study found result with the regarding the hypotheses that stated “H₃: BG related with financial performance positively”. Thus, the H₃ is rejected.

The research supports the premise that neutral external directors may be more eager to impress people who nominate them to the board than to carry out their primary monitoring role with the highest level of integrity. It may thus be argued, contrary to popular belief, that external directors have a conflict of interest with management, resulting in the theft of shareholders' capital. In addition, the results are incompatible with the hypotheses generated according to the research evaluations, the H_4 is rejected. One of the control variables, company size, shows a positive but negligible connection with EPS. This observation adds to the conclusions of [5]. It is so determined that, among other causes, large enterprises have greater investment options, it is capable of making profits higher than that of their smaller counterparts. In contrast, leverage shows a negative insignificant relationship in EPS.

5 Conclusion and Suggestions

There is evidence in the literature of a relationship between corporate governance and firm performance. A somewhat complex scenario, however, occurs when these two literary strands are combined and calls for more research. The five listed telecommunication companies in GCC were selected as a sample of the study for the period between 2012 to 2021. Moreover, the relationship among CG and the reported financial performance seems to be significant. Relevant facts and hypotheses applied in this research, it is determined that ROA is an indication of company performance, implying that the underlying hypothesis is accepted the entire hypothesis except H_4 according to the results of the analysis. However, for the dependent variable ROE it founded that accepted two hypotheses H_1 and H_3 and reject H_2 and H_4 . In terms of EPS, the data shows indicate it exhibits an insignificant link with the selected independent variables and conclude that accepted only H_1 and H_2 while the other hypotheses are rejected. To summarize the theory that about BS is all accepted which mean that it is the most important variables. There are some constraints emerged as a result of this study report. Some of the GCC's designated telecommunications businesses have been dissolved or are temporarily suspended. As a result, the study encountered the issue of not having access to all annual reports for publicly traded businesses during the study period. Furthermore, due to the variances in nature across the countries, it cannot be generalized.

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Artificial Intelligence (AI) in the Education of Accounting and Auditing Profession

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Abstract. The study aimed to explore the impact of artificial intelligence on the performance of counting and checking operations. This work provides a review of the literature on artificial intelligence and its use in the accounting and auditing professions. A narrative approach was used to analyze related articles and micro-research to provide a comprehensive overview of the topic. Particularly with regard to the accounting and auditing professions, artificial intelligence has lately undergone earlier breakthroughs that have caused a shift in their attention from paper to computer entries. The goal of artificial intelligence is to demonstrate how computer technology can execute activities as effectively and efficiently as humans, if not better. The future of the accounting and auditing professions depends critically on artificial intelligence technology since it gives us the means to perform our duties more effectively and efficiently. AI has significantly improved operations, reporting, and decision-making processes in accounting and auditing, among other fields.

Keywords: Artificial Intelligence (AI) · Accounting education

1 Introduction

The development in artificial intelligence has changed the way in which the world operates, which also includes the world of business. Technology is changing so much of our lives, and businesses are now using technology and Artificial Intelligence to discover and make use of new opportunities for having better business operations and increasing profitability and return while reducing costs of business operations and aiming to be more sustainable and competitive in the market.

Artificial Intelligence (AI) is quickly changing how financial institutions operate. Artificial Intelligence is now used in relation to the accounting and auditing profession, changing how financial institutions operate, switching their operations from paperwork to computer data and software entries. Artificial Intelligence can be referred to as the

application of computational tools which once required human intelligence [1]. The accounting field has incorporated Artificial Intelligence for over 25 years, mainly in the areas of financial and auditing reports [2]. Nowadays, Artificial Intelligence is applied in all accounting and auditing operations, which has led to the diminishing of the use of human accountants in organizations, possibly eliminating their relevance in the near future [3]. Accountants are on the verge of losing their jobs with their roles being taken over by computers and machines. With the progression in technology, many jobs and professions are eliminated as others are created. The use of Artificial Intelligence now is making the accounting profession easier, more precise, and much more efficient.

Accounting is a main field in business where information technology (IT) is applied in all aspects of basic accounting systems, financial software, and analytical accounting aspects. The speed in which information technology is advancing has allowed the integration of technology in all business aspects and operations. Artificial Intelligence is now a core part of the technology industry and a main function in the technological era we all live in. It is used to conduct more sophisticated human projects and responsibilities, competing them with less risk and more efficiency. Lombardo (2015) found that the power of computer technology lies within its energy trust and not only in its complexity and intelligence [4]. Artificial Intelligence and computers are bringing in other technologies and changing the way in which businesses function and operate. All businesses, big and small, are now being supported by technology, with both the public and private sectors now using Artificial Intelligence for regulatory compliance, quality, data entries, operations, and the detection of fraud [1]. Accounting and auditing systems have moved from paper entries and ledgers to the use of computer-based data formats and system entries powered with Artificial Intelligence to reach optimal results.

Technological changes and advancements are continuously increasing [5]. The integration of more advanced Artificial Intelligence has resulted in more enhanced systems. New technologies are now leading to more changes in the business world, affecting how they operate and sustain themselves in their respective fields. Artificial Intelligence has increased flexibility and efficiency and improved data-based systems, resulting in more effective and efficient reporting, and increasing the speed of reporting and operations. The changes in technology are changing how accounting and auditing operations are conducted. The Association of Chartered Certified Accountant (ACCA 2013) found that Artificial Intelligence is de-skilling the accounting human profession. The continuous use and reliance on Artificial Intelligence has highlighted the fact that technological changes and advancements may lead to new skills being focused on, while also rethinking the concept of “work” in the accounting world [6]. Accountants may be at risk of being replaced by artificially intelligent software and expert systems, making Artificial Intelligence one of the top five threats facing the accounting and auditing professions [6]. Murungi and Kayimba (2015) found that the failure to incorporate and make effective use of systems technologies in businesses may reflect on inaccurate financial information which is required as a means of gaining competitive advantage in the business world [7].

Through the application and adopting of the right Artificial Intelligence technologies, the entry and transmission of information and data can be significantly improved through the increase of speed, reduction of error and risk, reducing costs, and overcoming problems. The adoption of Artificial Intelligence technologies can provide cheaper

and more accessible data for more effective and applicable idea generating and decision making, and to spend less time on data collection and system entries and more time of more important tasks and aspects such as the need for better critical thinking, problem solving, setting effective strategies to be applying for more actual and functioning operations, more enhanced relationship building methods, and better methods of leadership within the organization.

This paper aims at presenting how Artificial Intelligence technology has affected the accounting and auditing professions, assessing whether the professions are to remain the same or change, and to show what changes have occurred in those professions. The study contributes to existing literature as it presents relevant literature related to the use and application of Artificial Intelligence in the accounting and auditing professions while showing how Artificial Intelligence has major potential in those professions.

2 Literature Review and Theoretical Framework

Artificial Intelligence has played a crucial role in improving the roles and proficiencies of auditing and accounting professionals, with the potential of furthering the possibilities of the accounting processes [8]. Artificial Intelligence covers a broad area, though not all functions and uses of Artificial Intelligence are used within the scope of accounting and auditing. Though the technologies incorporated within Artificial Intelligence don't all fall under the scope of business, its influence and benefits have made it a core part of doing business through different business functions such as marketing and management, production and distribution, sales, research and development, and accounting practices, amongst others.

2.1 Artificial Intelligence in Accounting and Auditing

Accounting systems describe the processes of keeping track of different business operations which occur in organizations in a specific period in time for them to maintain accurate and timely records of transactions in the organization. Tarmidi et al. (2018) supported the fact that accounting systems and the use and adoption of Artificial Intelligence technologies would lead to great results in accounting and auditing processes as it would make use of the Artificial Intelligence systems to modify processes in the fields and have more accurate and efficient financial records [9]. Accounting systems are seen to be used as a means of replacing the human labor force, therefore changing the dependence of businesses on humans to computers and machines through the implementation of those computerized systems [10]. This would lead to increasing the effectiveness and efficiency of accounting and auditing functions in the workplace, which would result in more automation of internal audit control and financial statements and reporting.

Moreover, the auditing process is a method of finding misstatements in the financial statements and reports of the company. Artificial Intelligence is used to integrate technologies in the accounting and auditing process in order to enhance the competence and usefulness of business operations. Artificial Intelligence has a crucial role in predicting possibility of financial distress which may be seen through the audit process. Hansen et al. (1992) stated that computer models have great effect on the decisions made in the

processes of accounting and auditing, which result in reducing the financial issues and distress which may be found in the financial reports [11].

While performing an audit, auditors seek to provide information that is correctly and fairly presented. Ivy et al. (2020) showed the importance of having practical governance on the methods used to implement Artificial Intelligence in the auditing process to be able to have ethical decision making through the achievement of correct and reliable audits in the financial reports of an organization [12]. Rezaee et al. (2002) noted that the use of electronic auditing methods allows auditors to present a higher level of confidence on the data they are processing and information they are presenting [13]. Paperless accounting systems have increased the standards of financial reporting, reduced the problems associated with accounting, and increase the value of the financial statements which are presented in a more accurate and efficient and timely manner.

A study by Longinus (2018) focused on evaluating the application of Artificial Intelligence for the purpose of record keeping in Banks in Nigeria [14]. The results of the study showed that there is a significant positive relationship between Artificial Intelligence and accurate financial reporting. Mohammad (2012) and Jessie (2019) conducted studies which showed that the automation of accounting and auditing practices don't have any influence on customer satisfaction, though they do have effect on the transparency and accuracy of reporting financial statements [15]. Also, a study by Jooman (2019) aimed at evaluating the affect of adopting Artificial Intelligence technologies on internal auditing practices in South Africa [16]. The findings of the research portrayed that the current affect of Artificial Intelligence on internal auditing is still in its beginning stages and that internal auditors don't yet really understand the vast possibilities that can be achieved through the correct and effective application of different aspects of Artificial intelligence technologies in the workplace. With the majority of accounting and auditing functions still being conducted by humans, there is less use of Artificial Intelligence as it is not being properly utilized in the accounting and auditing setting. Mhlanga (2020) aimed at assessing the influence that Artificial Intelligence has on digital financial inclusion in areas which include problems associated with the detection of risk, management, the asymmetry of information, fraud detection, and cyber security measures [17]. The researcher found that Artificial Intelligence has a significant effect on those aspects, and should be further utilized and incorporated within more aspects of the accounting and auditing functions in businesses, such as record keeping and financial reporting and decision making, in order to better utilize the resources they have while having better and quicker operations conducted in the accounting sectors. Dongre et al. (2020) noted that the use of Artificial Intelligence will enhance the value of accounting as it increases the capability and decision-making ability of the organization [18].

2.2 Benefits of AI Incorporation in Accounting and Auditing

Davenport and Ronanki (2018) conducted a study which suggested that businesses should put more emphasis on the use and adoption of Artificial Intelligence technologies for their extensive capabilities in business processes and not only for their technological uses [19]. That is, Artificial Intelligence can assist businesses in meeting their main objectives by having more automated business processes, more accurate data analysis and financial reporting, and by building better and stronger relationships with both

their customer and their employees. Chukwuani and Egiyi (2020) conducted a study to evaluate the effect of Artificial Intelligence in the accounting industry by portraying the level of technological advancements existing within the accounting industry through the automation of different accounting and auditing processes and procedures [20]. The researchers highlighted the place of accountants in an automated world and how those accountants can make use of modern technologies to enhance the businesses. The application of Artificial Intelligence on accounting functions was seen to have a positive effect on businesses. The researchers also suggested that Artificial Intelligence would affect accounting by reducing the cases of fraud and enhancing the quality and value of accounting information presented by the company.

Different studies referenced by Omotoso (2012) focused on the benefits of using Artificial Intelligence and incorporating it within the functions of accounting and auditing [21]. The benefits of Artificial Intelligence were many, including more effectiveness and efficiency, more consistency and structure in auditing tasks, better thinking and decision making, enhanced communication throughout the business, better training programs for staff, and shorter decision and implementation times for various business functions. Those who accept and incorporate the implementation of Artificial Intelligence are more ready to take on risks to gain a better place in the market by holding a competitive advantage in their respective industry [22].

Artificial Intelligence is crucial in determining the future accounting success of businesses. Small businesses which don't comply with adopting such technological advancements may face the major risk of being left behind in the market they operate within. As technology has been incorporated within the accounting and auditing functions of business operations, it is now vital for businesses of all sizes and structures to keep up with the changes and trends of technology in order to remain competitive in the business world [23]. Accounting firms are now effectively using resources to target the development of Artificial Intelligence technologies and solutions to meet the requirements of their clientele. Deloitte Touch Tohmatsu Limited has made an agreement to make more use of innovation and computer learning in the workplace. Deloitte developed 'Argus', which is a tool used solely for the purpose of auditing [24]. The organization also uses a 'Guided Risk Assessment Personal Assistant (GRAPA)' to work over ten thousand cases and assess over 50 risks to help auditors compare the risks strategy adopted. Also, Ernst and Young uses machine reading (e.g. QR and barcode labels) as well as drones for inventory observation and analysis [25]. When new regulations are introduced, Ernst and Young uses NLP to gather information and a human professional to validate results instead of re-examining all contracts the firms deals with. The company also uses its own developed tool that is the EY Helix GL Anomaly Detector (GLAD) in order to detect fraud in their journal entries [24].

A study by Cheyenne and Matthew (2018) was conducted to evaluate the perception of the implementation of Artificial Intelligence and the risks associated with it [26]. The research found that the implementation of Artificial Intelligence would result in the reduction of time spent on repetitive tasks and paperwork and improve the efficiency of the work performed in the field. Though the study did find that there is not enough education related to the most effective use of Artificial Intelligence as employees need to adapt to the new reality of their professions in the accounting and auditing fields.

Artificial Intelligence can and should be used to enhance business processes and activities to have better investment decisions and value and quality of business. The implementation of Artificial Intelligence in accounting has a means of being more appealing and useful to not eliminate the accounting and auditing work force but to better their work and enhance their capabilities while taking over time consuming repetitive tasks while ensuring accuracy, reliability, and less risks associated with the work. Artificial Intelligence can be used to enhance areas of business operations while digitalizing work processes, all while decreasing costs associated with business performance and increasing the effectiveness and efficiency of the organization.

2.3 Risks of AI Incorporation in Accounting and Auditing

Omotoso (2012) also noted that there are different disadvantages to the adopting of Artificial Intelligence technologies in accounting and auditing, and they should be considered along with the many benefits that such technology provides for businesses, specifically for the accounting and auditing aspects and business functions [21].

The downsides of the adoption of Artificial Intelligence technologies in accounting and auditing include the need for more time to assess different options related to decision making, as the process of decision making and providing options is short, due to the many alternatives presented this can take time to make the best decision possible. Also, there is a large cost to be considered for building, maintaining, and continuously updating the systems incorporated within the business. There is also a risk of such tools and updates being used by competitors, and the possibility of them being used against the auditor for legal purposes for having over-relied on financial evidence using aids that are technological. Bizarro and Dorian (2017) stated that as much as Artificial Intelligence technologies are efficient and reliable for practices in accounting and auditing, it still cannot replace some human factors, which include the ability to be creative, the ability to reason and judge, the ability to express motions and show disbelief in a subject matter [27]. Doshi et al. (2020) noted that although Artificial Intelligence technologies can bring about great benefits and major aids for businesses in relation to accounting and auditing aspects, they can still bring about major threats [28]. That is, there is great potential to complement the accounting and auditing professions, or even go further and replace them altogether. Doshi et al.'s (2020) notions on the use of Artificial Intelligence in those business functions differed from the ideas of Bizarro and Dorian (2017).

Luo et al. (2018) saw that some issues which are related to the adoption of Artificial Intelligence technologies in the field of accounting and auditing include the lack of experience, lower returns when it comes to higher investments, and the lack of needed skills and capabilities of professionals, as technology is taking over the field even more [23]. A main factor derived from the use of Artificial Intelligence technologies in accounting and auditing is that there are constant changes in the laws and regulations in such practices, requiring continuous maintenance and updates of the systems of Artificial Intelligence adopted in the organization in order for them to be updated and in compliance with the changes of regulations [29]. An example here is the changes in tax policies and requirements, which resulted in the need to make major changes and updates in accounting and auditing systems in order to ensure their compliancy with the updated laws and regulations of governments.

Zemankova (2019) indicated that the application of Artificial Intelligence in accounting and auditing may lead to inequality of income, less need for labor, lower financial safety, etc. [30]. Also, the application of Artificial Intelligence carries risks of exploiting algorithm and the possibility of deception, having error or bias, or incorporating some form of human logic or emotional error. Makridakis (2017) aimed at assessing the role of humans in the future as Artificial Intelligence is taking over the tasks that humans perform [22]. He noted that there may be numerous negative drawbacks related to the application of Artificial Intelligence which include the increased rate of unemployment as technology is taking over some tasks and professions and the possibility of inequality of wealth.

Mohammad et al. (2020) indicated that the challenges that are associated with the adoption and use of Artificial Intelligence in accounting and auditing include the development of effective policies for the Artificial Intelligence systems, to have skilled and professional labor with specific skills and capabilities which may be hard to find and require more funds to have the right professionals, and the lack of motivation and commitment from Artificial Intelligence from managers and leaders [31].

Within the functions of accounting and auditing, Artificial Intelligence raises ethical and moral concerns [30]. With continuously changing practices and procedures in businesses, and the method in which fraud is committed, new forms of crimes are rising. This increases the need for ethical guidance with regard to the way in which Artificial Intelligence can be used to detect such crimes through updating the system and ensuring the right coding required to ensure that the system catches such acts and doesn't increase the risks and errors associated with the business functions.

3 Conclusion

1. Artificial intelligence has dramatically changed the capabilities of accounting and auditing.
2. For many years, accountants have used technology to improve their jobs while adding value to the businesses they work in, which is the profession's ultimate goal.
3. The use of artificial intelligence allows to change the brand and transform the quality of business processes.
4. Artificial intelligence is a valuable tool to simplify and modernize business processes and operations.
5. The number of accountants and auditors cannot be completely reduced by the application of artificial intelligence techniques in the workplace because it still requires the need for human creativity and judgment.
6. As the auditing profession moves away from the method of preparation and system entries and more towards more specialization, there is a need for both centralization and decentralization of tasks and processes.
7. In the field of accounting, and within the function of auditing, Artificial Intelligence will not completely replace accountants and auditors, rather it would shift their focus towards different tasks as computers and machines take over specific tasks of data gathering and entry to ensure their efficiency and add value to the organization.

8. Artificial Intelligence should be seen as a compliment to human intelligence as a means of benefiting the processes of accounting and auditing and supporting the tasks within them to have better functioning business tasks.
9. Artificial Intelligence is not to take place of all accountant and auditor jobs, but rather to enhance their work processes and decrease the time and effort required to do them.

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Descriptive Study on Audit Quality Reporting: Evidence from Listed Firms in Bahrain

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Abstract. The aim of the study is to discover the descriptive statistics of the audit quality reporting items and investigate whether there is a significant difference in these descriptive statistics items for the years 2019 and 2020. Further, it evaluates the level of audit quality reporting of the listed firm. The sample of the study is 40 Bahraini listed firms on Bahrain Bourse for the years 2019 and 2020 (80 firms' observations). The results concluded that the average period firms receive audit reports is 50 days in 2020 and 49.5 in 2019. There is no significant difference between the two years, and this period is considered appropriate. The research also found that the audit reports provided by the audit firms are in the majority clean (unqualified) opinion, as the ratio was 97.5% in 2020 to 95% in 2019, and this percentage is considered high, which confirms the quality of the audit reports. Majority of listed firms in the Bahrain Bourse (80%) were reviewed by the one of biggest four audit firms, which reflects the awareness of the audit quality delivered by big audit firms. As a result, the study may assist policymakers and regulatory agencies in re-evaluating audit companies' monitoring function.

Keywords: Audit · Audit report · Audit quality reporting · Bahrain

1 Introduction

The issue of audit quality is a fertile area of research due to the role assigned to this profession in economic growth and financial stability by detecting manipulations and verifying the accuracy of information to reduce the risk of asymmetry among all parties [1]. The quality of the audit report plays an important role in most Bahraini companies, especially those listed on the Bahrain Bourse. The concept of audit report quality is broad and complex, as there are multiple concepts of the quality of the review, each concept focuses on an aspect of the quality of the review, some have linked the concept of quality review to the discovery of irregularities and fundamental errors, while some have focused on that there are other factors related to the client under review, and affect the quality of the review [2].

Based on the foregoing, it can be said that the concept of audit quality is the auditor's adherence to professional audit standards, professional ethics and codes of conduct, audit guidelines, rules and procedures issued by organizations dealing with the audit profession

and the maintenance of the integrity and independence of the auditor, to ensure that the expected objectives of the relevant parties are achieved [3].

The lack of audit quality can cause many problems within the company, the most important of which is the asymmetry of information within the departments in the company. In addition to the negative impact of the absence of the quality of audit reports on the requirements of accounting disclosure and the application of corporate governance. In the Kingdom of Bahrain, many companies are concerned with the quality of audit reports to avoid problems within the company. Nevertheless, the shortcomings appear in some companies because of many factors and reasons. This shortcoming negatively affects the quality of financial reports for companies in Bahrain [4].

In this context comes the audit tasks, which are a basis for investors' confidence in financial and non-financial information. This lends credibility to the audits on financial lists and reports, but after the bankruptcy scandals and the collapse of some companies with great economic weight. This collapse was associated with the manipulation of corporate accounts, and blaming the internal and external auditors, either because of participation in this manipulation or not disclosed. Hence, stakeholders raised questions about the effectiveness of accounting standards, the procedures applied in companies, and the extent to which auditors are responsible for the collapse of companies [5].

Previous studies assert that the external audit plays an important role in detecting accounting errors and manipulations and various forms of financial and administrative corruption in companies. The external auditor's work on these lists is performed by an independent professional person who has been approved by the relevant authorities to perform the task of monitoring and auditing the accounts and has been appointed by the shareholders at the company's ordinary general assembly meeting.

Hence, the current study attempts to achieve the following objectives: (i) to discover the descriptive statistics of the audit quality reporting items; (ii) to investigate the significant difference in the descriptive statistics of the audit quality reporting items for year 2019 and 2020; and (iii) to explore the level of audit quality reporting. By doing that, the current study will provide empirical evidence on audit quality reporting. In terms of practical significance, the results may help policymakers and regulatory bodies to know descriptive statistics of the audit quality reporting items and the level of audit quality reporting of the listed firms in Bahrain Bourse. Therefore, the study may help policymakers and regulatory bodies re-evaluate audit firms' monitoring role. This study can also help policymakers improve the effectiveness of audit reporting, which is considered important in monitoring the financial reporting quality.

2 Literature Review

In the auditing profession, achieving the best quality of review and maintaining the quality of professional performance is the common goal of practitioners as well as improving the performance and protection of the auditors in a way that increases confidence in the outcome of the auditor work [5]. The quality of the audit may be defined as the efficient and effective delivery of the audit process in compliance with the professional standards of reviewing and the norms and ethics of professional conduct provided by professional organizations, as well as quality control systems and hence, disclosing the errors and

irregularities detected to achieve the relevant parties the objectives expected from the review process.

The need for audit quality reporting comes based on the emergence of agency theory. Based on the agency theory, there is a conflict of interest between the managers and shareholders. Hence managers may look to their interests instead of maximizing the shareholder's worth. Based on this, shareholders are searching for a mechanism that could monitor the managers' activities and decisions. One of these mechanisms is appointing an external auditor. The role of the external audit is to achieve control over the contracts in the facility, such as the contractual relationship between senior management and shareholders, and the contractual relationship between shareholders and bondholders, and then the external audit helps in achieving a balance between conflicting interests in the facility.

The study of Al-Olimat and Al Shbail [6] found that there was a significant influence on the quality of external audit and corporate governance principles in reducing creative accounting practices in Jordanian companies, and the study recommended that industrial companies take advantage of the positive complementary relationship. To achieve the shared aim of decreasing creative accounting techniques, there must be a balance between the quality of external auditing and company governance norms. Further, Alaraji [7] analyzed the opinions of external auditors in Iraq and concluded that the application of corporate governance provides an appropriate level of trust and confidence for investors and users of financial reporting. The study discovered that reports generated and evaluated in line with corporate governance principles and techniques narrowed the expectation gap between external auditors and users. The study reveals that financial reports in Iraq, as well as the principles of disclosure and openness, are among the most significant factors influencing the closing of the expectation gap in Iraq's external audit profession.

Moreover, Oladejo, Jk [8] assessed the quality determinants of external audit and the relationship with users' confidence in the bank financial report. Overall results showed that technical training and efficiency, auditor size, participation performance and auditor independence were important determinants of external audit quality. A significant relationship between audit quality attributes and user confidence was also revealed in the financial report. Hence, the study suggests that auditors should be rewarded adequately to allow this. Obtain sufficient resources to conduct comprehensive audits capable of detecting intrinsic errors and errors in financial statements, it will enhance high-quality.

Britten, Causholli [9] created a composite scale that captures the extent to which reported audit committees to supervise external audits. The study found that when corporate audit committees indicate that they exercise strong oversight, they have a higher audit quality as shown in discretionary benefits, audit fees, the possibility of meeting or exceeding profit standards, and reformulation. Further, the market responds favorably to reports of rigorous monitoring, which corresponds to greater audit quality perceptions.

Almasria, Airout [10] discovered that the availability of suitable Accounting Information (AIS) Systems has a statistically significant influence on enhancing several areas of external audit quality. External reviewers agree that AIS has a key role in the quality of external audit procedures. The findings also demonstrate how AIS might improve

the quality of external auditing. The findings also reveal that AIS elements and applications considerably improve the quality of external audit processes (audit planning, audit testing procedures, risk assessments, and audit implementation), demonstrating that computer components can impact many areas of audit procedures. For audit organizations that use computers and information technology, the AIS system should increase the dependability of audited financial information and external audit procedures.

Nwadiolor and Obi [11] investigated the impact of big data on the quality of audit reports in Anambra State. It found that volume of data collection has a positive significant impact on audit report sufficiency, timeliness, and verifiability but has a negligible effect on audit report sufficiency. Second, the frequency of data collection has a positive significant effect on the sufficiency, timeliness, and verifiability of audit reports in Anambra State, whereas the value of data collection has a negative significant impact on the verifiability but a positive insignificant impact on the audit reports sufficiency and timeliness.

Cenciarelli, Greco [12] investigated the relationship between the characteristics of the external auditor and the possibility of bankruptcy. The study found that companies audited by expert auditors in industry, large size of audit firms as well as long-term auditors are less prone to default. Audit costs that are greater are more likely to default. Further, study shows that the incorporation of auditor features considerably improves the predictability of bankruptcy prediction models. Accordingly, auditor characteristics might give predictive indications about default risks, and that external examination can be useful in detecting financial hardship early. Further, the bankruptcy forecasting models can become more effective if supplemented by audit data.

Ugwunta, Ugwuanyi [13] indicates that the composition of the audit committee and the type of auditor have a significant impact on market prices for listed companies. There is a positive and important relationship between the composition of the audit committee and price of shares. The results indicate that while the type of auditor, the independence of the auditor, and the composition of the audit committee have a positive and important relationship with the market price of the shares, the acquisition of external auditors has a significant negative association with the market price of the shares. Accordingly, the study suggests that firms should strive to engage with big audit firm external auditors in Nigeria because such a union can improve the credibility of the audit process and thus increase their share prices.

3 Research Methodology

This study covers all listed firms in Bahrain Bourse, 42 firms for two years, i.e., 2019 and 2020 (82 firms' observation) where the data were hand collected from the annual report of the listed companies published and available at Bahrain Bourse. However, during the collecting data, two company was excluded due to the inability of getting the annual report of these two companies. Therefore, the total number of companies included in the study is 40 firms for 2019 and 2020 (80 firms' observations).

The current study is a descriptive study. Based on the previous study such as Schipper and Vincent [14] and Cohen, Krishnamoorthy [15], the current study considers these three items as a component of audit reporting quality:

1. Audit firm size (denoted Big4): dummy variable, “1” if firms were audited by Big4 audit firm (i.e., KPMG, Deloitte, Ernst and Young or PriceWaterhouseCoopers), and “0”, otherwise [16–19].
2. Audit report type (denoted ART): dummy variable, “1” if firms received a clean report, and “0”, otherwise.
3. Audit report lag (denoted ARL): is measured as the difference (in days) from the end of the financial year (fiscal year) of firm_i in period_t to the day of signing the audit report by the external auditor [16].

4 Results and Discussion

4.1 Descriptive Statistic

The first objective of the study was to discover the descriptive statistics of the audit quality reporting items of the listed firms at Bahrain Bourse for the years 2019 and 2020, namely the audit reporting lag, audit firm, and audit report type.

4.1.1 Descriptive Statistics for Audit Reporting Lag

Table 1 shows the average of days taken for the audit firms to audit the financial statement of the company. For 2019, the average difference (in days) from the end of the financial year of the firm to the day of signing the audit report by the external auditor is 49.18.

Table 1. Descriptive statistics for audit reporting lag

Variable	2019				2020				All			
	Obs.	Mean	Min.	Max.	Obs.	Mean	Min.	Max.	Obs.	Mean	Min.	Max.
Audit report lag	40	49.175	38	64	40	50.825	38	59	80	50	38	64

Further, the fastest company that received the audit report, in 38 days, is Ahli United Bank where the name of audit firm of this company was Ernst and Young. On the other, the company that took longest time to receive the audit report is Bank Muscat. The average difference (in number of days) from the end of financial year to the day the auditor’s signature is 64 days. This indicates that there is no delay in submitting the audit reports and the period is within the statutory time.

Regarding data for 2020, Table 1 also shows the average of days taken for the audit firms to review the financial statement of the company is 50.83. The fastest company that received the audit report, in 38 days, is Esterad Investment Company B.S.C where the name of audit firm of this company is KMPG. The companies that took longest time to receive the audit report, 59 days, are: (i) Gulf Hotels Group B.S.C; (ii) Bahrain Flour Mills Company; (iii) Bahrain Commercial Facilities Company and (v) Bank Muscat. Results indicate that all listed firms received the audit report within less than 60 days.

This indicates that all audit firms of the listed firms have submitted the audit reports before the statutory time.

By merging the two years, 2019 and 2020, Table 1 shows that the average audit report lag is 50 days, where the minimum number of days was 38 days, and the maximum was 64 days. The mean average of audit report lag found in the current study is close to the study of Al-Ajmi [20] that was conducted in the Kingdom of Bahrain, where the study found that the average audit report lag is 48 days.

Relative to international research, it is noted that the audit report lag in different countries is higher than in Bahrain. For example, the mean audit report lag in the study of Sultana, Singh [16] conducted in Australia is 80.67 days. In addition, the study of Afify [21] indicated that it ranges from 19 to 115 days, with an average of 67 days in Egypt. In Malaysia, a study by Apadore and Noor [22] indicated that the period ranged between 26 and 148 days, with an average of 100 days, and that 96% of the companies completed the review within four months. A study by Modugu, Eragbhe [23] indicated that it ranges of audit report lag is from 30 to 276 days in Nigeria. A study by Habib and Bhuiyan [24] indicated that the average of audit report lag is 61 days in New Zealand.

4.1.2 Descriptive Statistics for Audit Firm Size

Table 2 shows the average of listed firms in Bahrain Bourse their financial statement reviewed by the fourth biggest audit firms. For 2019, there are 8 companies (20%) whose financial statements were reviewed by non-famous companies, while the financial statements of 32 companies (80%) were reviewed by one of the fourth biggest audit firms in the field of auditing worldwide.

Table 2. Descriptive statistics for audit firm size

Variable	2019		2020		All	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Big4 audit firm	32	80	32	80	64	80
Non-Big audit firm	8	20	8	20	16	20
Total	80	100	80	100	80	100

Results show that KMPG reviewed the financial statement of 42.50% of listed firms during the year 2019. The following audit firm is EY, which reviewed the financial statements of 32.5% of listed firms. In third place comes BDO, which reviewed the financial statements of 15% of listed firms. Although BDO is not considered one of the biggest four audit firms around the world, it has higher numbers on listed firms whose financial statements were reviewed by BDO. Unfortunately, the finding indicates that the lowest two audit firms in the percentage of acquisition are DELOITTE and PWC with a percentage of 5% for each one. This means that DELOITTE reviewed only the financial statements of two companies and PWC did the same. Although these two audit firms are considered two of the biggest audit firms worldwide, the acquisition percentage is low in Bahrain (Appendix will be provided upon request).

Regarding 2020, Table 2 shows that there are 8 companies whose reports were reviewed by non-famous companies at a rate of 20%, while 32 companies reviewed their reports through the four biggest audit firms in the field of auditing worldwide by 80%. The big four audit firms still retain control over a large percentage of the listed firms in Bahrain Bourse. For more detail, KPMG acquired the largest percentage of the number of listed firms reviewed during the year 2020. This can be attributed to the accuracy of the audit process that is carried out within the KPMG, as the number of companies reviewed during this year reached 19 (47.5%) of the total number of 40 listed firms.

In second place is EY as it reviewed the financial statement of 12 companies (20%). Comparing these numbers with the previous in 2019, there is a decrease by one firm. In third place comes BDO, which reviewed the financial statements of 6 companies (15%) which is the same as the previous year, 2019. Regarding DELOITTE, reviewed only the financial statements of two companies as it was for the previous year, 2019. Lastly, the clients of PWC reduce for 2020, where PWC reviewed only the financial statements of one firm instead of two companies in the previous year, 2019 (Appendix will be provided upon request).

By merging the two years, 2019 and 2020, Table 2 shows that the financial statements of 64 listed firms were reviewed by big four audit firms with a percentage of 80%, while 16 companies listed on the Bahrain bourse were reviewed by non-big four audit firms with a percentage of 20%. Further, the study finds that the ratio has not changed, and the four largest audit firms remain the most popular with the number of list firms.

4.1.3 Descriptive Statistics for Audit Report Type

Table 3 shows the average of listed firms that received a clean audit report or any other type of report. For 2019, there are 38 (95%) companies received clean audit reports from audit firms, while there are only two companies (5%) that did not receive clean audit reports from audit firms.

Table 3. Descriptive statistics for audit report type

Type	2019		2020		All	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Clean report	38	95.00	39	97.50	77	96.25
Non clean report	2	5.00	1	2.50	3	3.75
Total	80	100	80	100	80	100

In more detail, the number of companies whose audit report was not clean for the year 2019 is two companies one company receive a qualified audit report and one company received a disclaimer audit report. Regarding data for 2020, Table 3 shows that the number of companies whose audit report was clean is 39 (97.5%) while there is only one company did not receive a clean audit report. This company received a disclaimer

audit report. Lastly, by merging the two years, 2019 and 2020, Table 2 displays that the number of companies that did not receive clean audit reports during the two years was three companies with a percentage of 3.75, while the largest number of companies in terms of receiving clean reports was 77 companies with a percentage of 96.25, and this percentage is considered high.

4.2 Difference in Descriptive Statistics

The study uses the T-Test option (Two-sample t-test with equal variances) to investigate the significant difference in the descriptive statistics of the audit quality reporting items for years 2019 and 2020 of the listed firms.

4.2.1 Difference in Descriptive Statistics for Audit Reporting Lag

Table 4 shows a difference in the mean value for the audit report lag in the years 2019 and 2020, as it was in 2019 equal 49.175, and become in 2020 equal 50,825. Based on the table, the T value is 1.1744. This means there is a difference between the mean value for the delivery of audit reports in the years 2019 and 2020. However, this difference is not significant as the T-value is less than 1.67.

Table 4. Difference in descriptive statistics for audit reporting lag

Group	Obs.	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
2019	40	49.175	1.075894	6.804552	46.9988	51.3512
2020	40	50.825	0.903616	5.714971	48.99726	52.65274
Combined	80	50	0.704192	6.298483	48.59834	51.40166
Diff		- 1.65	1.405016		-4.44717	1.147172
T-value		-1.1744				

4.2.2 Difference in Descriptive Statistics for Audit Firm Size

Table 5 shows no difference in the mean value for audit firm size in the years 2019 and 2020, as it is 80%. Based on the table, the T value is 0.0000. This means there is not any difference between the mean value of 2019 and 2020.

4.2.3 Difference in Descriptive Statistics for Audit Report Type

Table 6 shows a difference in the mean value for audit report type in the years 2019 and 2020, as it is 95% in 2019 and becomes 97.5% in 2020. Based on Table 6, the T value is -0.5823. This means there is a difference between the mean value of 2019 and 2020. However, the difference is not significant because it is less than 1.67.

Table 5. Difference in descriptive statistics for audit firm Size

Group	Obs.	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
2019	40	0.80	0.064051	0.405096	0.670444	0.929556
2020	40	0.80	0.064051	0.405096	0.670444	0.929556
Combined	80	0.80	0.045004	0.402524	0.710423	0.889577
Diff		0	0.090582		-0.18034	0.180335
T-value	0.0000					

Table 6. Difference in descriptive statistics for audit report type

Group	Obs.	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
2019	40	0.950	0.034899	0.220721	0.87941	1.02059
2020	40	0.975	0.025	0.158114	0.924433	1.025567
Combined	80	0.9625	0.021375	0.191182	0.919955	1.005046
Diff		-0.025	0.04293		-0.11047	0.060466
T-Value	-0.5823					

Table 7. Level of audit quality reporting

Variable	Mean		
	All	2019	2020
Audit report lag	50 Days	49.175 Days	50.825 Days
Big4 audit firms	80%	80%	80%
Audit report type (Clean)	96.25%	95%	97.5%

4.3 Level of Audit Quality Reporting

Table 7 shows the level of audit quality reporting. It indicates that the period for submitting the audit report by the audit firm to companies is on average 50 days. This average was 49.175 days in 2019 and become 50.825 days in 2020, which mean a little delay in submitting the audit report. May time take a little bit high in 2020 due to corona pandemic issue. This period is accepted and in line with the requirement of Bahrain law and other countries' laws such as Malaysia, Palestine, and Croatia. This indicates that there is no delay in submitting the audit reports by the audit firms as the period is within the statutory time.

Since the audit report contains his opinion on the credibility of the financial statements, investors prefer a shorter reporting period. The appropriate period for submitting reports after the end of the financial year should be low, i.e., less than 48 days, according to a study of Chan, Luo [25]. The study by Robin and Zhang [26] agrees with the study of

Feng, Habib [5] that the abnormally long period of time for issuing the audit report may indicate a lack of agreement between the external auditor and the audit client on some accounting issues or settlements. The US Securities Supervision and Trading Commission (SEC) modified the maximum period for this period from 91 days to 75 days, then it was reduced to 61 days in December 2006, because of developments in accounting systems and technological developments [27].

Concerning the audit firms' size, on average 64 of the firm's observation (80%) was audited by one of the Big4 company. This percentage is higher than what found in other studies, e.g., in Malaysia [28] and [29]. Hence, this percentage is accepted as companies are more interested to appoint one of the big4 audit firms to review their financial statements. The percentage was 80% for 2019 and 80% for 2020. Therefore, the percentage is still the same in both years. Hence, the study concluded that there listed firms are still willing to continue with the biggest audit firms.

Those biggest audit firms are dominated high percentage of firms around the world. A study by Allehaidan [30] confirmed that in the Kingdom of Saudi Arabia, the company (KPMG) controls the share and the highest share, as it provides audit services to 36 joint stock companies in the Saudi market, at a rate of 15.3%. Followed by Ernst & Young (EY), which provides audit services to 35 companies, with a percentage of 14.9%. Regarding audit report type, on average 96.25% of listed firms have received a clean audit report. This percentage shows that on average the financial statement quality of companies is high. Importantly, the percentage has increased in 2020 to 97.5% instead of 95% in 2019.

5 Conclusion

The quality of audit reports is one of the most important ingredients for the success of companies. This study aims to discover the descriptive statistics of the audit quality reporting items of the listed firms in Bahrain Bourse. Then, knowing the significant difference in the descriptive statistics of the audit quality reporting items for years 2019 and 2020 and finally explore the level of audit quality reporting of listed firms.

The study found that the average audit report lag of the listed firms (80 firms' observation) is 50 days, where the minimum number of days was 38 days, and the maximum was 64 days. Regarding the audit firm size, the study shows that the financial statements of 64 listed firms were reviewed by big four audit firms with a percentage of 80%, while 16 listed firms were reviewed by non-big four audit firms with a percentage of 20%. In terms of audit report type, study finds that the number of companies that did not receive clean audit reports during the two years was three companies with a percentage of 3.75, while the largest number of companies in terms of receiving clean reports was 77 companies with a percentage of 96.25, and this percentage is considered high.

Regarding the second objective of study, the study finds that there is difference in the mean value for the audit report lag in the years 2019 and 2020. However, this difference is not significant. The same finding is found for audit report type. There is a difference in the mean value for audit report type in the years 2019 and 2020. However, the difference is not significant. In terms of audit firm size, there is no difference in the mean value for audit firm size in the years 2019 and 2020, as it was 80% for the years of 2019 and 2020.

This means that 80% of firms' observation was audited by Big4 audit firm for 2019 and 2020.

Concerning the third objective of study, the study concludes that average difference (in days) from the end of the financial year of firm to the day of signing the audit report by the external auditor is accepted and in line with the requirement of Bahrain law. This indicates that all audit firms of the listed firms have submitted the audit reports before the statutory time. Concerning the audit firms' size, majority of the firm's observation (80%) was audited by one of the Big4 firms, and hence, this percentage is high and reflects the knowledge of firms about the advantage of appointing the big4 audit firm to review their financial statements. Regarding audit report type, 96.25% of listed firms have received a clean audit report which reflects that the financial statement prepared by firms' observation has a high quality.

The findings may assist policymakers and regulatory organizations in understanding descriptive statistics of audit quality reporting items and the degree of audit quality reporting of listed firms. As a result, the study may assist policymakers and regulatory agencies in re-evaluating audit companies' monitoring functions. This research can also assist policymakers to enhance the efficacy of audit reporting, which is regarded as one of the most essential techniques for evaluating the quality of financial reporting.

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Critical Discussions on the Upcoming Sugar-Sweetened Beverages Tax in Kuwait: A Qualitative Analysis

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Abstract. This study explores key stakeholders' perceptions and awareness of Kuwait's forthcoming Sugar-Sweetened Beverages (SSB) tax. Semi-structured interviews were conducted with thirteen government and industry participants. The data were analyzed using thematic analysis. The results revealed four key themes: (1) the motivation for imposing the SSB tax, (2) the process of the SSB tax design, (3) the challenges of tax implementation, and (4) the consequences of health-related taxes in Kuwait. In addition, the evidence from the data suggests that the Kuwaiti industry is confused about the reason behind the tax's introduction. Therefore, the government should be more transparent about tax implementation and its purpose. The study results provide important insights into industry and government views on the SSB tax, which contribute to the design of future SSB taxation in Kuwait.

Keywords: Sugar-Sweetened Beverages (SSB) Tax · Obesity · Qualitative analysis · Middle East · Kuwait

1 Introduction

In recent years, taxes on sugar-sweetened beverages (SSB) are rising worldwide in many countries to reduce the risk of obesity and generate public revenue (Jou and Techakehakij 2012), (Buhler et al. 2013), (Paarlberg et al. 2017). Following the global phenomenon, there has been an increased interest among the Gulf Cooperation Council (GCC) members, including Kuwait, to implement taxation. In this regard, the GCC Council agreement in 2015 approved legislation enacting a 100% tax on cigarettes and energy drinks and a 50% excise tax on SSB (Alsukait 2020). The reason defined by the council is to limit the use of substances that aid in obesity. At the same time, the GCC governments depend heavily on the revenues generated from the high oil prices. Thus, GCC countries are pursuing new approaches to diversify their economies, such as implementing the excise tax.

While the potential effects of SSB taxation have been widely discussed in many countries (Hagenaars et al. 2017; Ortega-Avila et al. 2018), few studies have examined

the effectiveness of the SSB tax in the GCC region (Alsukait 2020). This is important because variations in country-specific contexts of implementing the SSB tax could lead to uncertain results (Jou and Techakehakij 2012). Moreover, to our knowledge, research has yet to examine the perceptions of key stakeholders, including government officials and the beverages industry, regarding implementing the tax and its effects on decreasing SSB consumption in Kuwait. As a result, this paper aims to qualitatively explore: (i) the perceptions and awareness of the upcoming SSB tax among a sample of government officials and the beverages industry in Kuwait, and (ii) how taxation will affect the sales and consumption of SSB in Kuwait.

The current study has several contributions. First, it contributes significantly to the tax policy literature by exploring how the excise tax will affect the SSB industry. Second, it provides valuable insights for the global discussion on SSB tax and policy process design by identifying the challenges to implementation (Alsukait 2020). Lastly, Kuwait offers a critical case study because the forthcoming SSB tax will be among the highest in the world, and the country is characterized by a high level of beverage consumption and obesity (Jou and Techakehakij 2012).

This paper proceeds as follows. Section 2 describes the methodology used in this research. Section 3 discusses the findings, and finally, conclusions and policy recommendations are presented.

2 Methods

2.1 Research Design and Participants

Semi-structured interviews were conducted to examine how carbonated and energy drink taxes will be introduced and implemented in Kuwait. First, we identified the key players in enacting and carrying out the Kuwaiti tax using SSB tax policy literature and local newspaper coverage (Alsukait 2020). As an illustration, we located the Tax Authority Department under the Ministry of Finance as the implementing agency and communicated with the individuals mentioned in the newspaper outlining the tax implementation procedures. Then, we approached others at various organizations, including the Diabetes Division of the Ministry of Health, using a snowball sampling strategy. Also, we selected the manufacturers with the largest market share in Kuwait. The primary requirement for participant inclusion was working on or being impacted by the tax policy on carbonated and energy beverages. Finally, verbal informed approval was obtained and formally recorded for all participants.

Semi-structured interview guidelines were created for each major stakeholder category as part of the instrument development. All guidelines were created in accordance with the policy cycle stages, from setting the agenda to implementing and evaluating the policies (Moreland-Russell 2016). Also, following Alsukait's (2020) approach, the three topic areas are (1) the motivation for imposing the SSB tax (e.g., "In your opinion, what was the motivation behind the excise tax?"), (2) the SSB tax design process (e.g., "What alternative excise tax strategies did you consider if any?"); and (3) tax implementation challenges. The guidelines were pilot-tested by a local expert knowledgeable about the

carbonated and energy drink tax but had no direct involvement. In addition, minor wording changes were made to the guidelines to improve clarity in Kuwait's context. The guidelines were available in both Arabic and English.

2.2 Data Collection

Thirteen interviews were conducted in Kuwait from January to December 2021, before the tax implementation. Five interviews with government officials and eight interviews from the beverages industry. Due to the COVID-19 pandemic restrictions, interviews were conducted online through Zoom meetings and lasted from 20 to 45 min. Most interviews took place in Arabic. The interviews were taped, verbatim transcribed, and anonymously submitted. For accuracy and credibility checks, all transcripts were compared to the recordings; minor corrections were made as needed. The process of gathering data and analyzing it happened concurrently. However, given the exploratory nature of our study, the number of interviews we conducted with this homogeneous sample of significant stakeholders was sufficient to get their perspectives on the upcoming SSB taxation and to achieve code saturation throughout the investigation (Hennink and Marconi 2017).

2.3 Data Analysis

As discussed earlier, all interview meeting recordings were transcribed and recorded. Then, English translations of the Arabic transcripts were made for analysis. Based on the interview guides, a codebook was initially produced. Then, as the data revealed new codes, old codes were updated, and new codes were introduced in an iterative deductive coding process. Moreover, the codebook was reviewed based on the discussions of two transcripts. Finally, the key themes were compared within and across different stakeholder categories to draw consistent conclusions.

3 Results

According to the results from key informant interviews, four main themes were identified that should be considered to design future interventions of the SSB taxation in Kuwait. The major topics are (1) the motivation for imposing the SSB tax, (2) the process of the SSB tax design, (3) the challenges of tax implementation, and (4) the consequences of health-related taxes in Kuwait.

3.1 The Motivation for Imposing the SSB Tax

The purpose of the SSB excise taxes was unclear to the interviewees. In this regard, the government and health officials were asked about the factors impacting SSB taxation. All five respondents mentioned that tax motivation could be one factor that can impact Kuwait's tax implementation. There are different reasons behind the tax implementation, which include health and generating revenue. As one of the participants mentioned;

“There are many reasons why a tax is applied. The excise tax has two main reasons. The first reason is to limit people’s consumption of unhealthy products and limit the levels of Obesity and health risks. The second reason is to generate new revenue means for the country. As you are aware, Kuwait is highly dependent on oil for revenue, and with the global direction to have clean emissions and to look to new means of power, we have to find a new means of revenue.”

On the other hand, participants from the beverages industry were skeptical about the primary motive for implementing the SSB tax as one of the participants stated that;

“If we take the reason from the Tax Authority, they claim that it is health-related, and I believe they mean well. However, a health-related tax should include all unhealthy products. Otherwise, the main reason is to generate more income for the government.”

3.2 The Process of SSB Tax Design

Concerning the timeline and key stakeholders for excise tax implementation in Kuwait, the decision to announce these excise taxes originated from the Supreme Council, the highest GCC decision-making body. The “GCC Excise Tax Agreement” was signed by all six member states in November 2016 as one of the participants said;

“All the ministers of finance from the six GCC countries have met during the annual GCC meeting and have signed an agreement to introduce a 5% VAT tax and an excise tax of 50% on carbonated soft drinks and 100% on energy drinks and tobacco. There has been a pushback from the companies who will be taxed, and they have asked for aid from the government to offset the effect tax will have on their bottom line.”

However, participants from the beverages industry stated that the timeline of implementing the SSB tax is not decided yet due to political instability, as one of the interviewees mentioned;

“Kuwait is currently politically unstable with many changes in ministers and government officials. Without stability, it will not be easy to pass the tax legislation”

When asked why the tax specified these various rates for energy-carbonated drinks, the participants expressed much doubt over the agreement on the tax rate of 50% for carbonates and 100% for energy drinks. Moreover, the interviewees suggested that the definition should include all the SSBs, as one of the participants said;

“With obesity and diabetes at record levels, many public health experts believe that governments should tax SSBs, sweets, junk food, and other unhealthy foods and drinks. By swelling the prices of products that contain sugar, people will consume less of them and thus improve the overall status of nutrition and health.”

3.3 The Challenges of Tax Implementation

Regarding the challenges of SSB tax implementation, respondents showed great concern as different factors could affect the tax implementation in Kuwait, as one of the participants reported;

“There are many reasons [to implement the SSB tax], and as I said before, the main reason is that the Tax Authority Department has not finished yet. Secondly, a law has to be passed through the parliament. Thirdly we are studying the GCC implementation to use our learnings to introduce a smooth and easy system to monitor the Tax implementation.”

Moreover, there is high resistance from the public attitude towards implementing the SSB tax as they are not used to the tax system, as one of the participants mentioned;

“There is resistance as with any person who feels that his money will be affected. It is like a salary deduction; the employee would feel distressed without understanding the benefits that outweigh the negatives.”

Finally, the beverages industry will use different strategies to absorb the SSB tax and keep the business profitable. In that sense, the SSB tax’s effect on reducing sugary drink consumption will be less. The reaction of the beverages industry may offer different promotions, as one of the respondents said;

“The best practices were given to us from other countries as well. Which sizes worked, and which packages did not work? Some items were discontinued, and some items were reintroduced. Other promotions were newly created as well.”

3.4 The Consequences on Health-Related Taxes in Kuwait

Considering employing taxes to achieve public health outcomes in Kuwait, the respondents mentioned that the health consequences could be one of the factors that can impact the tax implementation in Kuwait. As one of the participants said;

“Kuwait is considered one of the leading countries with the highest levels of obesity in the region, if not the world. Moreover, the number one cause of diabetes after heredity is obesity and unbalanced nutrition.”

However, participants from the beverage industry showed that SSB tax implementation would help significantly in contributing to better public health results, as one of the interviewees mentioned;

“It is not right that you tax carbonated drinks with sugar and exclude chocolates, for example, or the cakes or anything else that has much sugar where kids eat them daily.”

4 Discussion

The present qualitative study explores the perception of government officials and the industry towards the imposition of an SSB tax in Kuwait, which is characterized by high levels of soft drink consumption and obesity. The study results provide important insights into the potential of SSB taxation to reduce obesity prevalence and economic diversification. While there is an underlying assumption that the GCC agreement on SSB tax is a health-related initiative, our findings suggest that most participants in our industry sample believe that the motivation is purely economic. Hence, the motivation for the SSB tax in Kuwait should be more salient to the beverages industry. As a result, more stakeholders, such as health organizations, should be involved in the initial tax design process related to SSB and unhealthy products in Kuwait (Craig et al. 2010).

It is apparent in our study that there was a complex interplay between factors affecting Kuwait’s SSB tax introduction. In this regard, the industry and government officials believe that the SSB tax implementation time is uncertain and may take longer than in other GCC countries. The perceived insufficiency of the tax policies and negative public attitude emerged as the main reasons why participants felt taxation would not be introduced soon. Therefore, Kuwait officials should pay more attention to improving the

tax-framing strategy (e.g., the size of the tax and product label) and educating the public about the reasons behind implementing the SSB tax (Barlow et al. 2018), Ortega-Avila 2018).

Considering that Kuwait is planning the first taxation design, the results show that the administrative feasibility may have limited the tax implementation. In this regard, all participants from the beverage industry agree that the tax should cover all sugary drinks. Otherwise, the health benefit could be diminished by replacing carbonates and energy drinks with sugary beverages like fruit juices. Moreover, the lack of a scientific justification for including or excluding particular drinks could undermine the long-term effectiveness of the SSB tax (Alsukait 2020).

Our findings also highlight that beverage manufacturers may employ different strategies in response to the SSB excise tax structure. These strategies may include absorbing the tax through renegotiating with retailers or introducing different pricing strategies by offering larger amounts to attract customers and remain profitable (Teng 2018), (Burman 2020). As a result, consumers will be less inclined to change their behaviors if prices do not rise as expected due to the tax, limiting possible health benefits (Ortega-Avila 2018 Alsukait 2020). Therefore, there should be continuous evaluation work to monitor the effectiveness of implanting the SSB tax and its potential impact on beverage sales and consumption.

5 Policy Recommendations

The SSB tax is a significant first step in promoting public health for Kuwait and the GCC countries. However, based on the study results, including all SSB in the tax design could increase the effectiveness of the tax design. Therefore, less substitution for other sugary drinks will be supplied. Simultaneously, this will incentivize the industry to develop a new formulation using less sugar content. As a result, the right message will be sent to the public as the purpose of the SSB tax is to provide better public health.

In addition, it is crucial having an evidence-based rationale for an SSB tax design to provide its sustainability and prevent industry resistance. Finally, our findings suggest considering other stakeholders, such as health professionals, in the decision-making process and educating the public. We hope policymakers will consider the above discussion during future SSB tax design to improve the effectiveness of the SSB tax in Kuwait.

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The Impact of Value-Added Tax on Small and Medium Enterprises

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Abstract. In the wake of a number of crises, governments have increasingly turned to a wide range of taxation mechanisms to finance their operations over the past few years. Recent years have seen a rapid rise in the value-added tax's profile as one of the world's most prominent tax systems, thanks in large part to its adoption by governments in the GCC. Though value-added taxes (VAT) have many advantages as a tax system, they have also been associated with a variety of challenges during implementation. In this paper, we examine the positive and negative impacts of VAT on SMEs. But the negative impacts seem more pronounced. This peer review provided a comprehensive summary of the reviewers' discussions regarding the impact of the value-added tax on small and medium-sized businesses. As a result of the novel approaches and discoveries offered by a number of scholars, this study was finalised. There were significant gaps in our understanding of how VAT impacts small and medium-sized firms, and this article helped to close those gaps.

Keywords: VAT · SMEs · Taxation · Burden · Consumers · Producers are all terms that will come up in this article

1 Introduction

There's no questioning the important contribution that small and medium-sized firms make to the overall economic health of a nation. Despite their size classification as "small and medium-sized firms", the vast quantity of these businesses has a major bearing on the nation's GDP. Reviews sometimes refer to SMEs as "the large business of medium and small company" because of this. Beyond the cash they generate, small and medium-sized businesses (SMEs) also help reduce unemployment rates in their local communities. Small and medium-sized businesses (SMBs) comprise the backbone of the American economy, producing 44.4% of GDP and generating 66% of net new employment annually. According to Doré (2019), they are the driving force behind America's innovative and competitive attitude. This highlights the potential role of medium and

small firms in the establishment process. Recent years have seen a shift away from taxing small and medium-sized firms at all, especially the value-added tax, in many countries. Undoubtedly, governments around the world rely heavily on value-added tax as an indirect tax mechanism (Bain et al. 2015). Value-added tax (VAT) is becoming increasingly popular, but the incentives for its design and application remain unclear, both conceptually and empirically. It might be challenging for some industries, especially those with fewer or smaller employees, to fulfil all of the VAT requirements. Very little research has been done on the impact of the VAT on the development and success of small and medium-sized businesses (Saniya 2019).

Many researchers believe that the most contentious aspect of studying the correlation between the introduction of VAT and the growth of small and medium-sized businesses is determining the impact of VAT on the behaviour of SMEs, in particular the impact of the registration threshold. By analysing the three most important behavioural reactions to the registration threshold—voluntary registration, collecting mechanisms, and growth impacts—an attempt was made to estimate the welfare and efficiency costs of the VAT (Saed and Ainebyona 2020). The experts all agree that the unique feature of VAT is the fact that it is a voluntarily registered tax. The threshold revenue level for required registration is not met when a business voluntarily registers for VAT. This could happen if the company spends a lot of money on intermediate inputs and/or if the VAT is already factored into the retail price of the product. Companies like these gain from registering for VAT voluntarily since doing so helps them to recoup some of the costs connected with collecting input tax from customers (Wadesango and Chirebvu 2020).

The fundamental objective of this study is to shed light on the correlation between the introduction of VAT and the expansion of SMEs. One strategy for accomplishing this goal is to conduct a systematic review of all relevant peer-reviewed scholarly articles. The literature often tries to justify the VAT in monetary terms.

This is the basic framework for the review I've prepared. We begin by discussing the theoretical foundations upon which VAT and the development of SMEs rest. In the second part, we provide a review of the research done on value-added tax and small and medium-sized enterprise (SME) expansion. Finally, a complete conclusion and some ideas for future study themes and directions based on the discovered gaps in the examined literature are presented to serve as a road map of the findings.

2 Theoretical Review

Growing global trade and financial markets are widely acknowledged to have had far-reaching implications for the various tax systems currently in place. Taxation was a primary source of revenue for the governments of many countries, particularly lower-income ones. Low collection and administration costs per unit of revenue is a common argument in favour of various types of taxes (Edith et al. 2014).

The use of new taxation policies has helped nations significantly reduce their budget deficits. The latest iteration of this tax is known as the Value-Added Tax (VAT). More than 136 countries worldwide rely heavily on value-added tax (VAT) to produce tax revenue, and this tax accounts for over a quarter of the tax revenue collected by these countries (Aizenman and Jinjarak 2008). The benefits of implementing the VAT in place

of existing trade taxes have been hotly contested, and various concerns have been voiced regarding the VAT as a taxation mechanism. Whenever there is a sizable black market, Dilger (2018) argues, the advantages of implementing a VAT are always in question. Revenue recovery for states with a middle-income economy reached roughly half a dollar for every dollar in trade tax revenue that had been lost during trade liberalisation. Recovery of tax revenues was found to be substantially lower in states with lower per capita incomes. This reasoning also applies to value added, where it has been shown that a value-added tax makes it easier to comply with the revenue influences of trade liberalisation (William et al. 2016).

One of the major advantages of value-added taxation is that it may be collected at every stage of the production process. Because the value added tax allows the tax authority to match the reported sales of each intermediate product with the recorded purchases of manufacturers utilising that intermediate product as an input in a vertical production chain, its implementation is associated with simpler execution (Atawodi and Ojeka 2012). Value-added tax (VAT) is easier to manage than income tax, but it is not considered as a remedy for the economic woes that plague many countries. Costs including data collecting and processing, legal claims, and fines for tax evaders all contribute to the fact that value-added tax enforcement is expensive (Gale 2017). Value-added tax collection should be more efficient as more resources are allocated to it. Money spent on this tax's implementation also boosts the quality of data monitoring, gathering, and processing (Toder et al. 2012). A value-added tax's practical implementation may be affected by a number of factors; nevertheless, politics and economics stand out as the most significant. Value-added tax collection becomes more difficult and resources for implementing tax regulations are reduced during times of political upheaval and division. The amount of value added tax collected is also influenced by the relative ease of tax evasion, which is in turn affected by a number of structural elements. Factors that matter include how many people live in cities, how large the agriculture sector is, and how liberal the economy is to international trade (Helgason 2017).

The concept of value added, like that of many other taxes, can be understood in the context of several conceptions. However, the benefits argument is generally accepted as the strongest justification for VAT. One could argue that people living in a given location should help pay for state programmes because they benefit from them.

The argument rests on the notion that everyone should contribute to the costs of operating a state in proportion to the benefits they receive from that state (Hassan 2015).

Reintroducing the benefit principle into the VAT ensures that it will continue to grow in popularity. Considering that "in the long run, the majority of people in a democratic society are not likely to be ready to bear the expenses of any financial system without making advantages from such a system", we can see why this is true. Certain advantages, in addition to being willing to pay any relevant value-added taxes, are required (Bain et al. 2015).

The Lindahl model is an alternative explanation for VAT that seeks to address the following three complex issues simultaneously: the breadth of government activities, the equitability of total expenditures across all products and services, and the equity of tax loads (Wadesango and Chirebvu 2020). Public services are justified by the marginal benefits they provide, so long as individuals are willing to pay for them. That is to

say, people in any given country should contribute to a public benefit in proportion to how much they value it. Lindahl's taxing model was created to maximise government efficiency while still delivering the highest quality public goods. The Lindahl tax model is universally defined by editorial boards as "each person's fair part of the total tax burden on a nation's economy" (Lucas-Mas and Junquera-Varela 2021).

Reviewers agree that inputs and inputted intermediates can be factored into analyses of the value added tax within the context of a general-equilibrium theory of tax-incidence. The statistics suggest that production coefficients are relatively changeable, and that demand is likewise rather elastic. Importantly, where plans assure that assumption coefficients are stable demand and inelastic, a VAT on top of corporate income tax may be neutral. Under a value-added tax system, it is unlikely that different industries will be subject to different tax rates. According to the tax-incidence theory, value-added tax is not predicted to change the relative cost of factors and commodities. To wit: (Bhatia 1982).

3 The Implementation of VAT

Common knowledge is that the first practical application of value-added taxes (VATs) occurred in Europe in the 1920s. France implemented a variant of the value added tax in the middle of the 1930s; by the 1950s, it was being collected from consumers at all points of sale, from shops and markets to warehouses and docks. After World War II ended and governments in Asia, Africa, and Latin America were no longer colonised, European states realised they needed to develop more regional cooperation than had been seen in centuries. The European Economic Community (EEC) was established for this very purpose, with the hope of maximising regional integration to stimulate even more economic growth (William et al. 2016). It was decided that harmony between physical and economic infrastructure and norms was necessary for successful regional integration to be accomplished. The value-added tax in France has since been proven to be a more efficient means of generating income from buyers than the system it replaced (William et al. 2016). For this reason, it was argued that the EEC's value-added tax should be enacted as rapidly as possible throughout the bloc's member states. Therefore, value-added tax became widely adopted across Europe. This is one of the main reasons why the IMF and the WB both support a speedy rollout of a value-added tax. The International Monetary Fund and the World Bank have both urged states to implement a value-added tax before seeking for loans from them in order to facilitate tax reform. Therefore, value-added tax has swiftly expanded all over the globe. The fact that over 166 countries use VAT in some form has made this abundantly clear (Wadesango and Chirebvu 2020).

Common belief holds that double taxation was one of the primary motivations behind the development of the Value-Added Tax. It is less essential where the money comes from than how well the government is able to collect it. Governments impose taxes on a wide range of activities based on a wide range of justifications. The quantity of money brought in is what is taxed for income taxes; the number of times a vehicle is driven on roadways is what is taxed for road taxes; and the home, factory, building, or business is what is taxed for holding taxes. The foundation of the value added tax is the monetary valuation of the economic gains from the production and distribution of

goods and services. There are many who argue that tax can never be the foundation of any kind of tax system. Although there is considerable support for eliminating taxes altogether, this is not possible (Toder et al. 2012).

4 What is Value-Added Tax

According to the European Union, value-added tax (VAT) is “an indirect tax that is levied on acquiring and supplying products and services at each manufacturing and distribution phase with limited exclusions” (Brashares et al. 2014). VAT is “a tax put on consumption and paid at each stage of the supply chain”, starting with the factory’s purchase of raw materials and ending with the store’s sale of the finished product to the consumer (Aizenman and Jinjark 2008). The following applies to companies that must collect and remit value added tax:

Customers must be charged value-added tax (VAT) when a business sells taxable products or services.

When a company purchases a product or service, they must pay the vendor an additional sum to cover the cost of the product’s value-added tax.

Value-added tax, or VAT, is a form of tax collected by some organisations and When customers make a purchase or use a service, businesses rely on the information they provide about those customers (assuming that the basic rate is applied to these procurements). This charge has been factored into the total price of the deal. It is the responsibility of all businesses that are required to pay this tax to keep track of the 5% of sales that they retain and to repay the whole amount to the appropriate state authorities. The ‘tax of outcomes’ is the value added tax paid by customers of the aforementioned companies (Ahlerup et al. 2015).

Transactions with tax-exempt organisations are treated in the same way as those with for-profit organisations. It follows that.

Each and every tax-paying organisation must apply 5% value-added tax to their purchases of goods and services (assuming that the basic rate is applied to these procurements) Income tax is the sales tax levied by the aforementioned entities (Brashares et al. 2014).

5 Importance of Implementation Value-Added Tax

There has been widespread agreement that recent economic downturns and financial crises have wreaked havoc on the tax system. In times of economic and political unrest, a state’s public budget deficit may increase, prompting policymakers to consider enacting a value-added tax in an effort to protect vulnerable industries, soften the blow of economic shocks, and strengthen those where government spending and taxation are pillars of economic growth. The value added tax is more helpful to the economies of these developed nations than those of developing nations. Furthermore, government fiscal policies are similar to other economic policies in that they aim to increase economic growth and stability, reduce income inequality, and battle inflation and monetary stagnation. As of the year 2020, Bogari.

6 From a Financial Perspective, the Value-Added Tax is Crucially Important

VAT is an indirect tax that is collected at every stage of the supply chain, from production to final sale. Since most of the VAT's base comes from individual purchases, the onus of paying this tax is largely on the consumer's shoulders (Albishi 2019). Thus, it is a consumption tax that is determined by the user's consumption level, that is, the total amount spent on goods and services, and also depends on the taxable price elasticity of demand. In cases where price increases result in a large decline in demand, price elasticity is said to be "significant" (Alavuotunki 2019).

Additionally, GDP expansion is significantly impacted by the VAT's effect on production and consumption. More money is collected as a result, as a wider range of goods and services are subject to taxation than under a sales tax system. Most countries deal with economic challenges using tools of the tax policy, one of which is the value-added tax, which is a component of the financial policy on which the economy ultimately depends (Alavuotunki, The implications of the value added tax on revenue and equity, 2018). This is according to a recent study (Alavuotunki, The implications of the value added tax on revenue and equality, 2018). Value-added tax improves the functioning of the economy in numerous ways:

Value added tax improves economic performance in a number of ways: To combat inflation caused by an abundance of currency on the market, some countries have raised the value-added tax they collect from consumers. Some countries may choose to increase government spending and broaden tax exemptions by reducing the value-added tax rate on consumer products in response to deflation brought on by economic stagnation and diminishing demand (Ahlerup et al. 2015).

(2) Investing in a wide range of industries and pursuits: Since investment is seen as a means to spur economic expansion, the rate of expansion is dependent on the distribution of capital among various sectors. When tax rates are low, investors direct their money toward the area with the highest expected return, which boosts that industry overall (Saniya 2019). As of 2019 (Saniya).

The value-added tax has a crucial role in increasing integration across projects, which in turn reduces costs and increases output, by encouraging investors to fund projects with integrated production, in which things are created in many different phases. So, production at factories that use integrated manufacturing techniques increases (Himani 2016).

People begin to compare saving and spending, finding a middle ground between necessities and luxuries, as the value-added tax is passed along at each level of the sale of commodities until it reaches the ultimate consumer, leading to an increase in commodity costs. With commodity prices on the rise, there has been a movement toward saving. A meta-analysis (Bain et al. 2015).

7 The Financial Significance of Implementing the Value-Added Tax

Overall, taxation accounts for more than 90% of government revenue worldwide. Value-added tax revenue is a steady stream of money that helps states maintain fiscal health

and promotes economic growth. Moreover, the tax base will expand as a result of the increase in the number of people who are obligated to pay taxes (Vittori 2019). This is because VAT generates a large portion of total tax revenue by means of:

First, there is the issue of increasing tax revenue while decreasing government spending. A state's general budget deficit that persists over time is among the worst things that may happen to its economy. In this scenario, states impose a value-added tax as part of a larger programme of structural changes designed to increase tax revenue. Either through increasing tax income or decreasing unnecessary expenditures (Daba 2015).

By requiring taxpayers to submit the tax invoice at each stage of the sale of products, value-added tax contributes to re-duce tax evasion by allowing for greater monitoring of company activities and less opportunities for tax evasion (Bansal and Alfardan 2020).

To sum up, Sect. 3.4 is dedicated to SMEs.

That small and medium-sized enterprises (SMEs) are vital to national economies around the world is hardly news. The creation of new employment opportunities is critical to the well-being of any economy, and small and medium-sized enterprises (SMEs) play a significant part in this. Small and medium-sized enterprises (SMEs) account for more than half of global job growth, and this is true in both developed and developing countries. In addition, they account for over 95% of all companies worldwide. However important it is to national economies, this sector is being held back by a number of factors that may be easily addressed. Most obviously, money issues and heavy tax burdens are examples of such challenges. The varying taxation systems of emerging countries mean that small and medium-sized businesses (SMEs) must adhere to the same rigorous criteria as any other sort of business entity (Wadesango and Chirebvu 2020).

8 Definition of and Significance of Small and Medium-Sized Firms

“A small and medium enterprise that is distinguished by a restricted number of personnel and a constrained flow of finances and resources” (Doré 2019) is a common definition of SMEs. There is a broad spectrum of staff sizes among SMEs. It is conditional on the particular regulations that are in existence. Under the Australian Fair Work Act 2009, an employer can have as little as 15 employees and yet qualify for some SBA programmes in the United States. A wide number of alternative frameworks can also be used to categorise small and medium-sized businesses. A small or medium-sized business can be evaluated according to its revenues, shipments, sales volume, assets, and annual gross or net revenue or net profits (Dilger 2018).

Several factors contribute to the continued importance of SMEs. Small and medium-sized businesses can be started with relatively little capital. In most developing countries, a single person manages a number of different companies. They might make a living by hawking things or making and selling food on the street. SMEs have been online since the turn of the millennium. So many more people can now choose to do remote work and boost their incomes. This kind of service to niche markets would not have been conceivable before the internet's change in the 1990s (Keskgn et al. 2010).

The rise of new rivals in mature markets is largely attributable to the efforts of small and medium-sized businesses (SMEs). For instance, a more streamlined business may be able to introduce cutting-edge technologies to the market before its more bureaucratic

competitor, perhaps causing a cultural shift. What actually matters for SMEs is that they provide local employment for a much larger number of individuals than may be available at larger corporations. Good for the neighbourhood, overall (Ibidunni et al. 2018). The growth of small and medium-sized enterprises (SMEs) is a key driver of job creation. And one more thing that sets SMEs apart is how diverse they tend to be. This means that anyone can potentially launch them. That they look different, act differently, and have different goals is implied. It is often believed that SMEs help ensure a more equitable distribution of wealth. The importance of maintaining this equilibrium, both socially and economically, is growing (Atawodi and Ojeka 2012). These companies are the cradle for cutting-edge research and innovation. By providing the leeway for growth, they aid established companies in maintaining a competitive edge. Additionally, SMEs have greater flexibility and quickness in making decisions. As a result of fewer expenses associated with managing the organisation as a whole, they are able to turn out products more quickly and at a lower price. There are evaluators whose job it is to keep an eye on small and medium-sized enterprises (SMEs) to make sure they aren't holding up any major private sector initiatives. Successful strategies to expand manufacturing and industrialization across a country must include support for small and medium-sized businesses (SMEs) (Dilger 2018).

Three and a half points for the long-term viability of small and medium-sized businesses:

- There is no denying the importance of long-term viability to the success of any business, no matter how big or small. But there are always challenges when attempting to incorporate sustainability into day-to-day operations. This is widespread practise in societies that view financial reports as an indicator of a company's health. There are many challenges to the long-term viability of small and medium-sized enterprises. The primary difficulty is the lack of available financial means. That seems to be the toughest part. Spending a lot of money is needed to make the change to sustainability. Funding will be overlooked if small and medium-sized businesses (SMEs) don't treat it as an urgent issue affecting their ability to do business. One difficulty is the limited amount of time available. SMBs have a little chance of surviving the current climate of intense competition and growing into sustainable enterprises (Dilger 2018).
- Though there are many challenges that small and medium-sized enterprises (SMEs) must overcome on their way to long-term success, there are also many opportunities. Sustainability shouldn't be viewed as a burden by small and medium-sized firms; rather, it should be viewed as an opportunity to boost both brand recognition and revenue. If businesses take these measures toward sustainability, they will attract the growing number of shoppers willing to pay a premium for environmentally responsible products and services. Small and medium-sized firms have many potential avenues for growth in the realm of sustainability (William et al. 2016).

9 Enhancing the Competitiveness of Small and Medium-Sized Businesses

Rising levels of competition are widely acknowledged as a major challenge that small and medium-sized enterprises (SMEs) have faced over the past few decades. The ability

of small and medium-sized businesses (SMEs) to compete is conditional on a variety of factors. Both the internal and external environments in which SMEs function are linked to these factors. The internal reliance of SMEs on IT has been found to be the single most critical factor in assuring their competitiveness, according to previous studies. This could ultimately aid small and medium-sized enterprises in getting their work done more efficiently. There should be a corresponding reduction in costs. Investment in and development of human capital is another important factor within the company. They achieve this through consistent mentoring and training. This is the most important investment they can make if they want to maintain competitiveness. Small and medium-sized enterprises' (SMEs') ability to put strategic management into practise is also crucial. This will aid in strategic planning, cost reduction, and making the most of the company's resources (Bruning and Lockshin 2000).

There are too many other factors to account for while trying an explanation. The political and economic context, however, appear to be the most important factors. Stable governments are more likely to attract investments in small and medium-sized businesses. When the economy is strong and developing, financial institutions and the government will be more willing to assist small and medium-sized businesses (SMEs). According to (Ahmedova 2015).

10 Market Share of Small and Medium-Sized Businesses

According to World Bank reports (2020), small and medium-sized enterprises (SMEs) are vital to the development of economies all over the world, but especially in developing countries where they account for a disproportionately large portion of the market. Small and medium-sized businesses (SMEs) account for the vast majority of the world's establishments and play a pivotal role in driving economic growth and creating jobs in every region. They make up more than half of the workforce and 90% of the businesses. In developing countries, formal small and medium-sized businesses account for as much as 40% of GDP. If you add in all the unrecognised SMEs, you get far larger numbers.

11 To What Extent Does Value-Added Tax (VAT) Hinder the Growth of Small and Medium-Sized Businesses?

The evaluation of the VAT's impacts on growth and performance of small and medium-sized enterprises remains a hard issue, despite the fact that previous research guarantees that its use and using it as a source of revenue has been recognised as a promising challenge for national economies. Furthermore, governments, businesses, and individuals share equal accountability for the effectiveness of any VAT system (Alavuotunki, The effects of the value added tax on revenue and equality, 2019).

To emphasise, since SMEs are used to working in a low-tax firm environment, they fear the financial and operational consequences of VAT compliance (Hassan 2015). The implementation of the VAT system has the potential to significantly impact small and medium-sized firms due to the potential decrease in profit margins. Indirect costs for a corporation result from the Value-Added Tax's effects on pricing, financial reporting,

cash flow, the supply chain, compliance procedures, and tax accounting, among other areas of business.

According to the available data, the impact of VAT regulations on the expansion of small and medium-sized firms is minimal (Keen and Lockwood 2017). A lack of effective uniformity exists when it comes to value-added tax and small and medium-sized firms (Grigore and Gurau 2017). Factors related to value-added tax (VAT) and small and medium-sized enterprises (SMEs), as well as other organisational limits and environmental factors, are major contributors to this gap. The difficulty of keeping track of taxes is a major contributor to the erratic behaviour. The VAT system has been assured to be consistent with the needs of small and medium-sized enterprises. This disparity is instead attributed to the VAT's associated paperwork and procedures (Saniya 2019). Due to external factors such as poor economic performance, a high corruption index, and political instability, some claim that VAT stunts the expansion of small and medium-sized firms (Gale et al. 2016).

12 Conclusion, Thoughts and Directions for the Future

Despite Value Added Tax's (VAT) origins as a solution to problems with tax collection identified in earlier research, the tax rate itself has become controversial. There were several challenges and complexities throughout the implementation of VAT. Value-added tax, or VAT, is a kind of taxation that is notoriously complex to set up and administer. Despite the fact that research has revealed flaws in the VAT system, it has not provided evidence that the tax is pointless. It has been argued that value-added taxation (VAT) is harmful to distributional equity, especially in developing countries.

Evidence suggests that states with a higher value-added tax rate have higher rates of economic growth. It helps both large corporations and medium-sized businesses expand. However, this perspective is still up for debate. Governments concerned about introducing VAT, then, must treat SMEs differently. The burden of VAT on these companies should be lighter as a result. Because the net revenue from include very SMEs is usually little, several countries prefer to exempt select SMEs from VAT.

As a result of the broad adoption of value-added tax systems like VAT, SMEs are able to more easily incorporate this tax into the pricing of all goods and services they offer, increasing their competitiveness in the marketplace. The second VAT has a greater influence when the expenses incurred by large-scale enterprises in the forms of consumers, investors, and suppliers are taken into account. Having a legitimate VAT registration number may also inspire trust in your business among consumers. Furthermore, the VAT Flat Rate Scheme may offer some benefits (FRS).

Many obstacles may arise when implementing VAT, especially for smaller and medium-sized enterprises. The first is that it significantly and unfavourably affects the profitability of this significant industry when clients are unable to pay VAT. The liquidity of small and medium-sized businesses is also affected. Among the many problems of applying VAT to SMEs is the inevitable increase in prices of 20% for end users. It's possible that some clients will reach their breaking point and look elsewhere to fulfil their needs. Small and medium-sized enterprises (SMEs) have less success financially when prices are not allowed to fluctuate.

Future research is needed to fully understand how the value-added tax affects the bottom line and competitiveness of medium-sized firms. The results of studies in this field can be used to both the business and social worlds. In light of the recent COVID-19 pandemic, it may be necessary to conduct additional research into the effects of value-added tax on economies. A joint probe involving all GCC states is possible.

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**Technology, Tourism, Hospitality,
and Health Care Services**



Teal Organizations in Times of Uncertainty

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Abstract. Theoretical background: the technological challenges associated with the Fourth Industrial Revolution, innovative inter-organizational networks, and low employee engagement brought about by complexity and the associated uncertainty, represent some of the toughest challenges that organizations will have to encounter in the coming future. In this context, the advent of the *evolutionary organization* model is an important step towards re-identifying the fundamental principles governing an organization, perhaps as an extension or revision of systemic thinking. Using this model, the enterprise that act as living organisms become more agile and better equipped for establishing efficient and reliable inter-organizational relationships.

Purpose of this article: To examine the functioning of so called teal organizations in a reality of Industry 4.0 and in times of uncertainty. This paper takes the position that soft management factors influence the development of such organizations and that they must adapt to the changing conditions if they are to survive.

Research methods: The research process consisted of several stages, which included desk research, research based on the author's survey questionnaire and individual in-depth interviews. The survey was performed on a 900-person sample employed in micro and small enterprises. This article is the effect of the work conducted as part of the third stage of the 2020–2021 empirical research.

Main findings: The research shows that in a world of Industry 4.0 organizations need to adapt to changes and try to adopt them. The elements of partnership, flexibility, trust, and creativity are essential components of a teal organization. Today, organizations adopting the teal model must recognize that doing so entails a gradual process. It is therefore necessary to have a continuous overview of how these organizations operate in times of uncertainty. The results of all phases of the research indicate that organizations need to take into account changing circumstances and adapt to them. The analysis of the selected soft management factors shows their impact on the development of an organization, especially for the management staff (management style, organizational structure) in the age of Industry 4.0.

Keywords: Teal organizations; Teal management · Self-management; Leadership · Industry 4.0

1 Introduction

In today's economic reality, all organizations are seeking strategies, methods, and tools that would enable them to achieve success. Any organization that aspires to survive in an unpredictable and turbulent environment should strive to innovate and be innovative.

Enterprises from the SME sector find success in their innovative activities when they join larger network structures that comprise a larger number of participants (Thorgren, Wincent, and Örtqvist 2009). Moreover, the evolution of inter-organizational relations influences the development of dynamic abilities necessary for the enterprise to create knowledge. Creating innovation requires the involvement (Mittal, et 2018) of experts from various scientific fields. Hence, in the process of creating innovation, it is often necessary to use the knowledge of experts from outside the organization (Kodama 2007).

It seems that the guiding principle in locating the extent and orientation of these changes may be the idea of teal organizations. Teal organizations embody society and the way of looking at the world (Pluta 2016) through the eyes of the individuals who compose it. Knowledge resources (Bouncken, and Fredrich 2016), an important component of soft management, which include intellectual capital (human, social and relational capital), data and information as well as knowledge and trust are crucial for organizations in the era of Economy 4.0. For organizations today to be competitive, the spirit of modern, agile and adaptable management should be developed Rzepka, Maciaszczyk, Wiśniewska, Kocot 2021).

As a new type of organization, the teal organization concept establishes a new paradigm for the so-called self-managed organization (Rzepka 2022). The basis of this paradigm is employee empowerment, in which employees gain a sense of the value and importance of the work they do for the company. This implies a change in the relationship, as the employee turns into a shareholder and, eventually, a co-owner of the company who has an influence on the decisions made within it. The partnership in the teal organization goes very far (Kocot, Wiench, Maciaszczyk 2021; Turulja, and Bajgoric, 2019), which means that there is practically no leadership in such an organization, and individual employees (Rzepka, Borowiecki, Olesiński 2019) assume functions depending on what they are able to do and what is needed. The teal organization is based on trust, listening, and effective communication. Here, employees are empowered to the fullest extent possible.

On the basis of numerous empirical studies, the author of this article argues that in the modern era known as Industry 4.0 (Rauch, E.et. 2020) we will observe an increase in the number of various types of specialized organizations that are better adapted to functioning in a turbulent environment generating new types of human activity, including new types of services (Bouncken, and Kraus, and Roig-Tiern 2019). Such growth will create the premises for significant changes in management and will require new management methods that will favor self-management and reduce traditional hierarchy in favor of modernization and self-management. All this leads to the emergence of a new type of organization called *teal* (typical of the post-industrial era) that has evolved from the orange organization (typical of the industrial era).

2 Literature Review

The concept of a teal organization is understood herein as an emerging innovative type of organization whose paradigms are characterized by self-management (Rzepka 2020, 2022). This results in a transformation of workplace relations, as the regular staff member becomes a partner and, eventually, a part-owner who shares in the organization's key decisions. Its main premise is the empowerment of the employee, who gains an awareness of the importance and relevance of work done for the company. As Olesiński (2020) argues, the organizations in question function on the basis of soft elements such as effective communication, trust and properly nurtured interpersonal relations.

As a result of research and literature review on Teal organizations (Blikle 2014, 2017, 2018, Hopej-Tomaszycka and Hopej 2018, Holwek 2018, Kałwa-Rojczyk 2018, Olesiński 2017, 2020, Skrzypek 2017; Rosiński 2018, Zygałło 2018, Kirov and Kirova, 2017, Rzepka 2022) it has been established that Teal organizations are a new approach to managing organizations operating under changeable conditions. They are based on a flat organizational structure in which the complex hierarchy has been discarded and the classic incentive system is replaced by intrinsic motivation of employees (Hopej-Tomaszycka and Hopej, 2018; Collins, 2017, 2018). This approach brings tangible benefits to any company focused on "reinventing itself", according to the concept of F. Laloux, author of *Reinventing Organizations* (Laloux 2015).

Laloux (2015) states that the teal organization is the next step in the evolution of the human approach to how organizations should be mastered. Teal organizations will certainly dominate in the future due to the fact that a fundamental change in society is imminent. It can already be seen that for an increasing number, self-realization is a key factor. Teal organizations can be described by the breakthroughs shown in Fig. 1. The first is self-management, which translates into efficient operation even on a large scale without the need for consensus and hierarchical structures. This therefore means introducing peer relationships. Leadership still exists, however, it develops systematically through the pursuit of a common goal that is also of a great significance to their followers. Wholeness in teal organizations is about accepting people and encouraging them to express themselves in the workplace, while evolutionary purpose is seen as the pursuit of a higher purpose that can change over time. This assumption reflects the approach that the future can be neither foreseen nor controlled, but instead needs to be discovered.

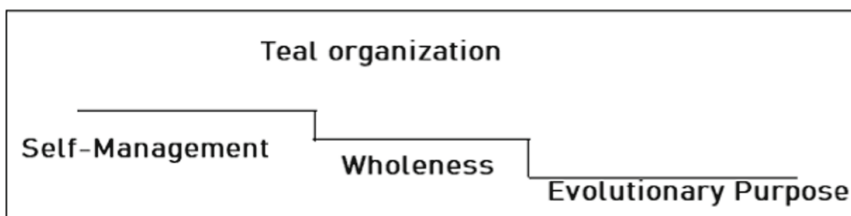


Fig.1. Breakthroughs of Teal organization. Source: own elaboration

A teal organization consists of a team that lacks not only hierarchy but even clearly defined roles, although differences in the functions performed by employees can be

found (Rzepka 2022). It is characterized by teamwork without affecting the hierarchy of positions while focusing on building trust and partnership in every aspect of work (Wyrzykowska 2019), thanks to which the team achieves flexibility to cope with changes as well as antifragility (which should be understood as the ability to adapt to even sudden situations, rapid changes in every direction and aspect). In addition, it is characterized by self-management, and achieving not just balance, but wholeness, (Rzepka 2020) i.e. the ability to be authentic in every dimension of everyday life. The inspiration for the people in such an organization is the awareness of an evolutionary goal, one that is not imposed from the top but changes according to a “fluid” and therefore unpredictable reality. The goals of the organization are consistent with the goals of the individuals. This “symbiosis of goals” results from observation and “awareness” of what is happening.

Teal organizations are companies that manage their processes (Szczepańska-Woszczyzna 2018) at every level of the operations. It can be likened to a well-functioning machine in which the various stages of the process move from one person to another. Individual roles are not assigned in advance, but are defined according to needs arising on an ongoing basis (Sharp et al. 2019). In such a management model, it is the individual predispositions and strong points of every worker that count, not just rigid structures and pre-assigned tasks (Burns, Roberts, Posey, and Lowry 2019). However, many managers uphold the approach that the Teal model is idealized (Pustoschkin 2016) and achieving it is highly improbable.

Today, in the era of uncertainty and Industry 4.0, which changes the way companies operate (Roblek and Mesko 2016), the functioning of organizations is quite difficult and demanding (Zhong et al. 2017). The main focus of Industry 4.0 (Masood, & Egger, 2019) is on the accuracy and preciseness seen on a par with a higher level of automatization (Thames & Schaefer, 2016). The development of ultra-automated machines, and the constant evolution of information technology translate into revolutionary technical and technological changes. These, in turn, bring about new solutions, such as the 5G system or the development of the Internet of Things, create convenient opportunities for companies to improve their performance. It is clear that the overarching aim of putting the assumptions of Industry 4.0 into practice in any enterprise is a higher level of efficiency and agility. Unfortunately, simply streamlining production processes or making smaller changes is not enough (Roy and Sarkar, 2015). In order to achieve the desired goals, a major transformation needs to take place in both technological and organizational terms, which will also mean revising the business model of the enterprise (Roblek, Mesko, Krapez 2016: 23–46). Since this revolution has increased productivity, transformed the economy, stimulated industrial growth, and, above all, changed the profile of the workforce, forcing it to develop agility.

Industry 4.0 signifies the start of a new chapter of the industrial revolution that is mainly oriented around interconnectivity, automation, machine learning, and real-time data. Industry 4.0, which includes intelligent production, combines physical manufacturing and operations with intelligent IT, machine learning, and big data to create a more comprehensive and interconnected system for all enterprises focused on both manufacturing and managing their supply chain. Although every business and organization that operates nowadays is distinct, they all share a similar dilemma whereby it is essential

to have real-time connectivity and real-time insight into data on partners' processes, products, and people (Stverkova, Pohludka 2018: 98).

Industry 4.0 is likely to bring about changes in the way we create (Miśkiewicz 2019), develop services and products, and lead the organization. It is an integration of the digital and physical worlds. There is no question that the penetration of the concept of Industry 4.0 into the operational and management processes of businesses will increase. Information flows, advanced technologies, and materials - also known as the digital and physical technologies that comprise Industry 4.0 - enable organizations to gain actionable insight and information in real-time. This, in turn, enables companies to achieve completely new outcomes in a completely new way and potentially revolutionize supply chains, production, and business models (Mittal, Khan et al. 2018).

3 Research Methods

The studies described here are part of a larger international project 'Teal organizations in Economy 4.0'. As part of this project, research was conducted not only in Poland, but also in the USA, Georgia, England, Hungary, Ukraine, the Czech Republic and Spain. The research procedure involved 3 stages. First, a pilot study (N = 300) was carried out, followed by a core research (N = 300 PL and 330 different countries) and repeated research (N = 300). A survey questionnaire was used as a tool and distributed to top executives. The survey questionnaire included sections on various topics (Maciaszczyk, Rzepka, Kocot 2021) and each section composed of 5–7 questions. The overarching goal of the research was to determine the degree of collaboration between modern companies and consumers and demonstrate the features attributed to agile organizations. In addition, it wished to determine the degree to which these characteristics determine diverse facets of a company's performance, including its innovativeness. The research has been and will continue to be carried out respecting the rules and regulations designed by OECD-DAL.

Taking into account the formality and objective of the study in a reliable manner, it was presumed that all investigations would be conducted using a variety of research techniques and methods. This has led to triangulation of methods and techniques in data gathering and analyses, as well as the development of final findings. In order to gain the fullest possible understanding of the phenomena under study, document analysis (1), in-depth one-on-one interview (2) and questionnaire (3) were used. Statistical analyses of the accumulated figures collected from the study was carried out using SPSS STATISTICS, while the method chosen was the χ^2 test - Pearson's Chi-square test for independence.

The purpose of the analysis was to identify those characteristics of the studied enterprises that have a differentiating effect on the level of successive indices. To achieve that one-way ANOVA was used as a validation method for the formulated hypotheses. The F (Fisher-Snedecor) test was used to verify the null hypothesis of equal mean values for the general population. Due to the fact that the indices calculated with the Kolmogorov-Smirnov test were considered continuous variables with near-normal distributions (at the significance level $\alpha = 0.05$), the use of the F test was possible. A Cronbach's Alpha test was applied to check the reliability of the questions on the investigated companies. This made it possible to isolate variables with statistically significant correlations. The ordinal scales will be treated as quasi - quantitative scales.

The pilot study was conducted in May–June 2020, core research took place in August–September 2020 and repeated research in December 2020–January 2021. Each time, 300 interviewees from various micro and SMEs, with different geographical coverage and size, took part in the different stages (see Table 1). Managers from a variety of micro and small enterprises were eligible for the study through purposive sampling. The selection of enterprises was based on the availability of SMEs.

Table 1. Range of respondents’ activities

The prevalent modus operandi of the enterprise (%)			Geographical scope of activity (in %)				Number of employees (in%)				
	A*	B	C		A	B	C		A	B	C
Trade	19.7	10.3	16.6	Local	19.3	22.1	9.4	0-9	13.7	9.1	3.3
Manufacturing	17.6	13.9	28.0	Regional	8.2	12.4	27.3	10-49	24.0	18.8	55.1
Service	62.7	75.8	55.4	National	30.0	23.0	22.0	50-249	15.5	28.2	16.6
				International	42.5	42.4	41.3	250-999	18.5	20.9	16.6
								1000 -and over	28.3	23.0	8.4

*A-Pilot, B-I stage, II-stage
Source: own research

Taking the variables into account, it can be concluded that the survey involved men in executive functions (57.9%) mainly employed at service enterprises (62.7 and 75.8%) with an multinational reach (42.5%) and with 50 to 249 employees (28.3%). The industries of the respondents varied, but it can be seen that at each stage of the survey representatives from IT, education, catering, commerce or banking (see Table 2) took part.

Table 2. Compilation of branches and respondents’ ages in the following stages of the survey

Industry (%)						Age of respondents (%)			
A*		B		C			A	B	C
Banking	9.4	Hotels	16.5	Aviation	5.3	25 or younger	57.9	11.5	26.5
Transportation	8.6	Municipal	14.5	Fuels	4.0	26-35	27.5	26.1	22.4
Automotive	5.2	IT	13.2	Automotive	3.8	36-45	9.9	37.9	36.3
Finance	5.2	Banking	9.4	IT	11.4	46-55	4.3	19.1	11.2
IT	3.0	Education	6.8	Education	3.8	56-65	0.0	5.5	3.4
Logistics	2.6	Construction	5.8	R+D	4.0	65 or over	0.4	0.0	0.2
Gastronomy	2.6	Gastronomy	5.8	Gastronomy	5.2				
Construction	2.6	Other	28.1	Construction	5.3				
Trade	2.6			Trade	3.4				
Insurance	2.1			Banking	10.0				
Other	56.2			Other	43.8				

*A-Pilot, B-I stage, II-stage
Source: own research

4 Results

This article analyses only areas related to drivers of teal organizations. The first of the analyzed areas referred to the chosen features of Teal organizations (see Chart 1). The graph presents the results of one of the areas of the pilot study as a reference point for further research. The second phase of research shows a substantial divergence, in particular in terms of approaches to creativity, trust and partnership. (see Chart 1).

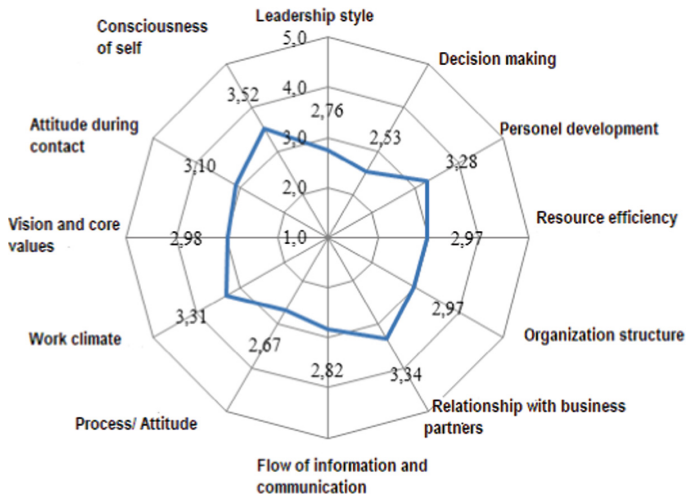


Chart 1. Teal qualities in organizations. Source: Own creation.

However, this disparity may be considering that the survey was completed in a post-pandemic time, when the negative effects of the crisis reached every sector of the economy. The 2022 study is being conducted as a continuation and stage IV.

5 Discussion

An analysis of some components was undertaken for the purpose of this article. The results cover the 3 stages of research.

Research on chosen determinants of teal organizations posed the first significant problem of how to evaluate the process of change in organizational structures. This text includes five questions, two of which are particularly detailed. The first of the questions selected attempts to find out whether every function is subdivided internally, for example, research, production, sales, and finance, which the authors have concluded to be the characteristic features of the structure of the industrial age. During the course of the research, there was a significant change in the rules for creating jobs according to the respondents, which increased from 21.4% to 36.4%. It is definitely worth noticing that the role of intra-organizational and inter-organizational relations has been increasing (Table 3).

The next section of questions raised the issue of the decision-making method. The first of the answers stated that the boss made all the decisions. Analyzing the above data, it can be concluded that a score of 25.8% was found in the pilot study, which differed significantly from the scores in the subsequent stages (12.1% and 15.4% respectively). In the latter case, the process of making decisions focused on the company's values. Here, we have seen an increase from 9% in the pilot study to 24.3% in stage II.

The third area was devoted to analyzing relations with business partners. The first question raised the issue of radical relations with business partners, the second question addressed the relations of a strategic nature. Respondents gave the following answers to

Table 3. Selected research components

	Pilot study (%)	stage I	stage II
Organizational structure			
Matrix (all departments have their own internal subdivisions)	21.0	38.5	36.4
Network	30.5	24.5	39.7
Decision-making			
The boss makes all the decisions	25.8	12.1	15.4
Decision-making focused on the company's values	9.0	18.8	24.3
Relationships with business partners			
Radical	5.2	2.1	2.3
Purposeful, strategic	34.8	41.5	46.9
Leadership style			
Based solely on giving orders and control	26.6	10.0	19.0
Based on motivating according to set goals	16.7	26.1	29.7

Source: own research

the first of the two questions: 5.2% in the pilot study and 2.3% in stage II. In the second question, the respondents definitely focused on strategic and purposeful relationships, which accounted for as much as 46% in stage II.

The fourth problem was changing the leadership style. The answers selected for the purpose of analysis covered the management style based on giving orders and controlling (a traditional approach) as well as the leadership style based on motivating according to set goals (a contemporary, developing style). It is noticeable that the latter is becoming more prevalent (16.7% in the pilot study to 29.7% in stage II).

In the near future, authors plan to continue the research to confirm the data, specifically, the quantity of questionnaires to be completed should be increased and the research should include more countries. In addition, a thorough examination of the collected data is commissioned, which includes the age and work background of the interviewees, as well as the business size and type. In the following stage, interviews will be conducted in order to dispel emerging doubts.

Data collected thus far, some of which have been analyzed above, demonstrate the validity of the research hypothesis that states that *as technology gets more advanced, the tendency to change thinking, management, inter-organizational cooperation, and the independence of employees increases* (Fig. 2).

Of the teal traits in organizations, self-awareness received the highest mean score with 3.52 points on a scale of 1 to 5. Relations with business partners (score of 3.34), workplace culture (3.31) and personal development (3.28) were slightly less important. Making decisions is the teal trait that was least valued by the surveyed companies with an average score of 2.53 (Fig. 3).

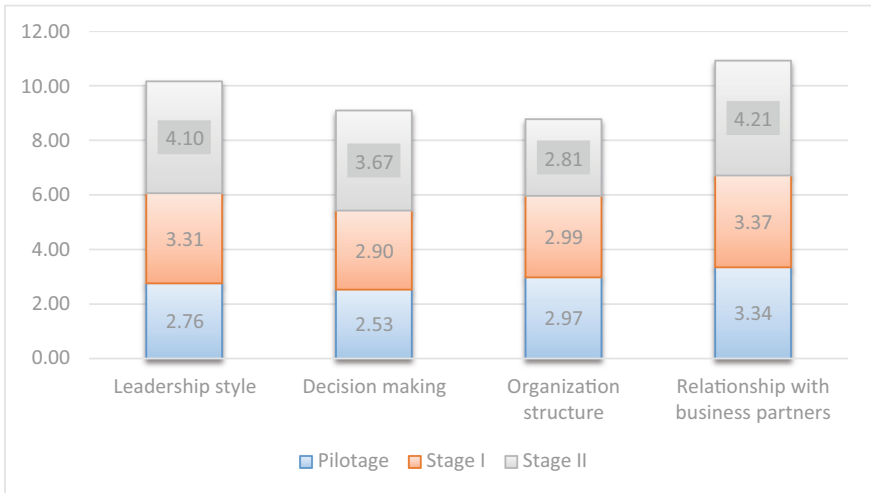


Fig. 2. Selected aspects of teal organizations. Source: own research

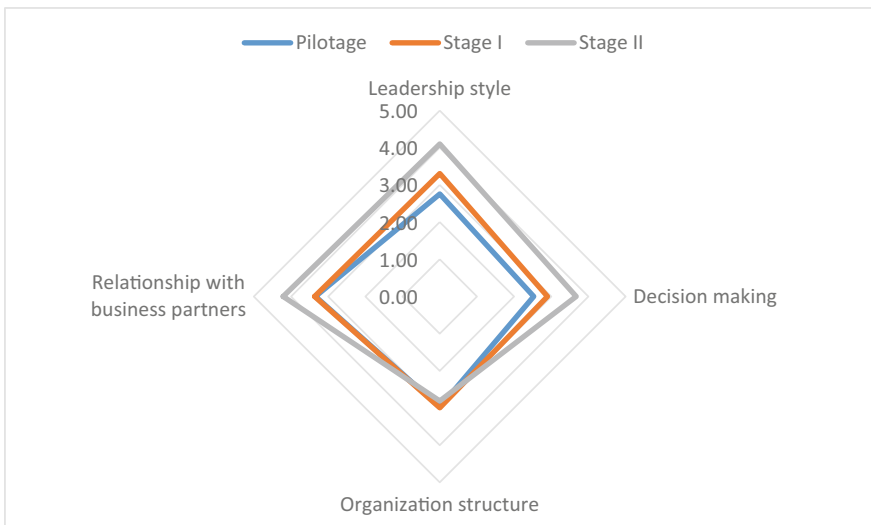


Fig. 3. Aspects of teal organizations. Source: own research

In light of the research, it should be stated that the teal approach to management is not a set of specific procedures or business practices ready for implementation. Rather, it consists of changing the way people think about business, people, and the world, leading to different ways of making decisions and developing organizations (Lee 2017). These changes mainly concern:

- trusting people, utilizing their resources, and allowing them to do their jobs and perform their tasks in their own way is better than strictly controlling their activities and organizing their work from the top down;
- cooperation is better than rivalry, understanding others is better than judging them, and decisions made based on emotions and intuition are better than those based only on rational premises;
- reacting to the current situation and a flexible adjustment of one's actions to the current conditions is better than scrupulous future planning and sticking rigidly to these plans.

The results of the research clearly show that transformation to the teal model can take place in different ways. Unfortunately, such a transformation will sometimes be impossible to achieve. Much will depend on the levels at which the organization currently operates and the extent of employee awareness. The different groups of employees should therefore be diagnosed and compared. On the basis of the results, practical measures can be designed to achieve the expected transformation. Even if a total transformation cannot be guaranteed, trials will provide insights into the company's strategic situation and ease the introduction of relevant development activities.

6 Conclusions

The concepts underlying the teal organization are best introduced during the process of building the organization. Alternatively, existing organizations can be converted to the teal model. To achieve this, the individual directly managing the organization and its senior management (e.g. the supervisory board) must consent and participate. The order of changes within these concepts is not strictly defined and depends on the organization itself. Moreover, it is also possible to practice only partial changes, eg in "Striving for Wholeness" without the practices of "Self-Management". However, only introducing changes in all three areas will give us the effect of their mutual reinforcement.

Today, in order to become a teal leader, managers need to be able to modify their current management style toward supporting rather than replacing the team. Facilitator leaders are coaches rather than supervisors. They allow the team to make decisions on a variety of issues, and at the same time, in deadlock situations, are ready to support the team in some decisions or disagreements. They leave a great deal of autonomy to employees but they are aware that they can always count on their support and advice should they need it.

Research shows that numerous awards await those companies that are able to introduce teal or its elements. The facts say most of them now functioning teal companies brings unexpectedly good both financial and emotional effects in the form of commitment employees. Such organizations show the inclinations to faster development. The presented research shows that teams organized in such a way are more effective, employee satisfaction and commitment are increasing, and the level of rotation is decreasing. These companies are really growing faster than the competition.

Contemporary organizations that want to survive in the midst of uncertainty and the new reality, known as Industry 4.0 (Rzepka 2019b, 2022), have been faced with the need to meet numerous challenges arising within the market. Therefore, they should develop

distinctive characteristics that determine their uniqueness. The enterprise must therefore acquire characteristics that constitute a unique response to the emerging stimuli flowing from the market environment.

The transition from green to yellow, i.e. the change from pluralistic to evolutionary, can be seen as a long-term process of innovation implementation that provides practical solutions to some of the problems faced by enterprises in the digital age. Regarding the generalization aspects of the results and the limitations of the study, it is evident that the above thoughts refer only to a very specific and inimitable context. However, following the reasoning of F. Laloux, the emergence of similar cases in different geographic contexts, circumstances, productive sectors and associations of organizations, led the authors of this study to highlight some specific features that may clarify various transformations of companies towards less hierarchical, more self-managed and more people-oriented organizational models.

The way companies were managed evolved continuously from red to amber to orange to green. This was influenced by shifts in consciousness, which in the final stage led to the emergence of more powerful and people-friendly forms of management. Once the Teal paradigm has fully emerged, we are likely to look back and find that the organizational forms and practices of the turn of the 20th and 21st centuries are far less than expected. Past experiences and the development of the teal organization paradigm prove that it is possible to create far more productive, people-friendly and purposeful organizations. We seem to be at a turning point: it is an opportune moment when it is time to stop merely trying to adapt the old model to the changes taking place in consciousness and instead move on to the next one. The Teal model of organization will be better adapted to the complexity and challenges presented by our times.

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Are Tourists Interested and Finally Decide to Visit Tourist Attraction After Seeing Virtual Tour?

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Abstract. Despite the significant loss, pandemic Covid-19 had been an enabler for digital transformation, specifically in Indonesia. In the tourism industry, the emergence of virtual tours brings fresh fashion for people to spend their leisure time. Following the calming down pandemic, the innovation of virtual tourism or virtual tours can promote specific tourist locations, which are expected to increase interest and decisions to visit. This research intends to discover virtual tours' power to attract visitors. The researcher used a quantitative method with simple linear regression analysis and distributed questionnaires to 104 people who had participated in virtual tours using meeting platform such as Zoom, Google Meet, or Webex. The results of this study indicate that the virtual tour influences the tourists' interest and decision to visit, at a moderate correlation level based on Pearson Correlation Test, with a percentage of 34.6% and 30%, respectively, based on R^2 result.

Keywords: Virtual tour · Tourist visit interest · Tourist visit decision

1 Introduction

The pandemic has inspired actors and governments to use digital technology to optimize tourism. Currently, tourism stakeholders in Indonesia are implementing various technology strategies to continue reviving the creative industry and economy so that market opportunities can be more extensive after the pandemic. One of the innovations that can help tourism actors deal with conditions during and after the COVID-19 pandemic is virtual tours. The innovation of virtual tourism or virtual tours opens up new economic opportunities for industry. Even though the virtual tour has not been able to replace the social needs of physical traveling, virtual tours are believed would be applied perennially to promote tourist attractions. Through virtual tours, tourists perceive a shadow of the atmosphere or scenery around the tourist location, increasing the interest and decision of tourists to visit directly to the site [1].

Therefore, this study aimed to determine the effect of virtual tours on the tourists' interest and decision to visit. Research in tourists' interest and decision has been more focused on advertisement and promotion [2], tourist attraction development [3], and e-wom in social media [4]. This research seeks to fill the gap of how powerful virtual tour on desire and decision tourist to visit a destination.

2 Literature Review

2.1 Virtual Tour

A virtual tour is a simulation of a tourist location, usually consisting of video sequences or a collection of photos and can combine several other multimedia elements, such as sound effects, music, narration, and text [5]. The technology can place the user in the image shown, allowing the user to increase situational awareness and the ability to see, capture, and analyze relevant virtual data. Virtual tours enable users to grasp an environment without being physically present or travelling to that location. In common use, virtual tours must be web-based so they can be accessed anywhere and anytime [6].

Virtual tours enable the relaxation and escape of being in a place by looking at the monitor screen and using the internet [7]. The various types of virtual tours known are Virtual Tour Video Tapped, Virtual Tour PowerPoint and Google Maps, Virtual Private Tour, Virtual Tour Public (General), Virtual Tour LIVE Report, and Virtual Tour 3D. In this research, virtual tours were then assessed by looking at (1) The Slides of Tour, (2) The Footages (Including videos, photos, 360 photos), (3) Google Maps Tour, (4) Reality Experience, and (5) The Meeting Platform.

2.2 Visit Interest

Kotler explains interest as an impulse, which means a solid internal stimulus driven by action, where this drive is influenced by positive motivations and feelings about a product [8]. Interest in visiting is a feeling in which someone is triggered to visit a place or area that is according to him/her interesting to visit. In this case, the theory of visiting attraction is taken from the buying interest [9], which is explaining the dimensions of buying interest in several components. Firstly, being interested in finding information about products where consumers who are aroused will be encouraged to seek more information at this stage. Second, considering buying, consumers will learn about competing brands and the advantages that these brands have. The third is interested in trying, where consumers will seek the benefits of product solutions and evaluate the product. They rationally judge the product to generate interest in trying it. Fourth, wanting to know the outcome, in which consumers will view it as having different advantages and uniqueness in providing benefits that are used to meet their needs. The last stage is wanting to have a product, where consumers will pay more attention to products that deliver the help they want and finally consumers will take an attitude towards the product by forming an intention to buy or own the product.

2.3 Visit Decision

Consumer purchasing decisions are a critical stage in the process. As a result, producers must understand consumer behavior when making purchasing decisions. Consumers will develop trust in the product and its position based on its uniqueness and advantages. For example, the consumer will select the product he prefers [10].

According to [11] in purchasing decisions, there are stages or processes in the problem adjustment approach to decision making. The process includes problem identification, information search, alternative evaluation, purchase decisions, and post-purchase behavior. In this study, however, the author will modify the theory for research purposes by involving the appropriate target respondents. The author does not include the final stage, Post-purchase Behavior, in the questionnaire statement because the respondents who will fill out only arrive at the decision stage to visit and do not visit specific locations they see in a virtual tour.

3 Methods

The method in this study uses a descriptive method, which is a method that examines the status of a group of people, objects, conditions, a system of thought, or tourism classes in the present [12]. The descriptive method in this study was used to explain in detail the relationship between the dependent variable (dependent variable) and the independent variable (independent variable). This study will explain the influence of virtual tours on visiting interests, virtual tours on visiting decisions, and the influence of visiting interests on visiting decisions.

H1a: Virtual tour influences tourists' visiting interest

H1b: Virtual tour influences tourists' visiting decision

This research also uses quantitative methods which are the methods used to answer research problems related to data in the form of numbers and statistical programs [13]. The measurement of variables in this study uses a Likert scale in the questionnaire with a score range of 1 to 5. The highest score (strongly agree) is 5 and the lowest value is 1 (strongly disagree). The data sources of this research consist of primary data (questionnaire).

The technique used to process the data included a validity test, a reliability test, a classical assumption test consisting of a normality test, a heteroscedasticity test, and a linearity test, followed by a simple linear regression test, a product moment correlation analysis (Pearson), and a T test, to test the hypotheses. With a sample size of 104 people, the population of this study is people who have participated in a virtual tour organized by a tour operator. This study aims to determine the respective effects of virtual tours (X1) on the interest (Y1) and decision (Y2) to visit tourists.

4 Results

4.1 Profile of Respondents

Profile of the respondents are presented in Table 1 as follows:

Table 1. Profile of respondents

Gender	Female	64.4%
	Male	35.6%
Age	18–25 y.o	65.4%
	26–35 y.o	18.3%
	36–50 y.o	11.5%
	51–70 y.o	4.8%
Education	High school	27.9%
	Vocational/bachelor’s education	58.7%
	Masters and doctoral	13.5%

As shown in Table 1, this study’s respondents were dominated by Generation Z and Millennial women with undergraduate study background. All respondents had participated in a virtual tour, most of which were organized by tour operators, and were asked to complete a questionnaire about their experience for participating in a virtual tour by looking at the components of virtual tour. The results are shown in Table 2 as follows:

Table 2. Respondent perspective on virtual tour

Components of virtual tour	Average
Slides of virtual tour	3,78
Footages (video, photos, panoramic photos 360)	3,88
Google map feature	3,81
Real experience	3,65
Meeting platform	3,97
Average	3,82

Table 2 shows Real Experience has the lowest score among all components. It is plausible as a virtual tour is not a substitute but complementary to a physical tour. Virtual tours can only treat a longing for a tourist attraction but cannot replace the in-person experience [14].

4.2 Is There Any Influence of Virtual Tour on Tourists’ Visit Interest and Decision?

To see if there is an influence of virtual tour on tourist visit interest and decision, the partial test was applied. This test is carried out by comparing Tcount with Ttable or by looking at the significance column for each Tcount with a value of = 0.05 [17]. In the T-test, decision-making is made with several criteria: if the value of Tcount > Ttable, then

there is a significant effect of the independent variable (X) on the dependent variable (Y), and it means that the alternative hypothesis is accepted. The null hypothesis is rejected and vice versa.

Based on the results, the value of the T-test on the first alternative hypothesis (H1a) is $T_{count} > T_{table}$ ($7.342 > 1.983$), which means the first alternative hypothesis (H1a) is accepted and has a significant effect. This explains that virtual tour has evidently influenced tourist visit interest. Furthermore, the second alternative hypothesis (H1b) shows that $T_{count} > T_{table}$ ($6.607 > 1.983$), so the virtual tour variable has a significant effect on the decision to visit and (H1b) is accepted.

4.3 Prediction of the Tourists' Visit Interest and Decision

To predict the likelihood of tourists' visit interest and decision, simple regression equation was used. The equation of simple regression for $Y_1 = 10.394 + 0.566X$, which means that the consistent value of the visiting interest variable is 10.394. The X regression coefficient of 0.566 states that for every 1% addition to the virtual tour value, visiting interest increases by 0.566. This regression coefficient is positive, so we can assume that the direction of the influence of the X variable on Y1 is positive.

Furthermore, for $Y_2 = 14,793 + 0,711X$, the constant of 14,793 means that the consistent value of the visiting decision variable is 14,793. The X regression coefficient of 0.711 states that for every 1% addition of the virtual tour value, the value of the decision to visit increases by 0.711. This regression coefficient is positive, so we can assume that the direction of the influence of the variable X on Y2 is positive.

4.4 How Strong the Relationship?

To see the strength of the correlation between variables, Pearson Correlation Analysis was utilized. This correlation is a statistical test tool used to test the strength of the relationship between two variables when the data is interval or ratio scale. Calculating this correlation requires that the population and the sample come from two normally distributed variants [15]. The results of the Product Moment Correlation analysis will obtain a correlation coefficient of (r) which is then used to determine the strength of the relationship (correlation), which is described in the categories: 0–0.199 very weak; 0.20–0.399 weak; 0.40–0.599 medium; 0.60–0.799 strong; 0.80–1.0 is very strong. Based on this study's results, virtual tours' effect on visiting interest and the influence of virtual tours on visiting decisions are at a moderate correlation level with values of 0.588 and 0.547.

4.5 The Contribution of Virtual Tour to Tourists' Visit Interest and Decision

To find out the contribution value of some factors, we look at the coefficient of determination value. The Coefficient of Determination is symbolized by R^2 , which is meaningful as the contribution of the influence of the independent variable (X) on the dependent variable (Y). This R^2 value is used to predict and see how much influence the X variable contributes to the Y variable [16]. The value of the coefficient of determination ranges

between zero and one. A value close to one means that the independent variable (X) provides almost all the information needed to predict the dependent variable (Y).

Based on the results of this study, we found that the R^2 value for the influence of virtual tours on visiting interest was 0.346, which means that the effect of virtual tour variables on visiting interest variables was 34.6%. Meanwhile, the impact of the virtual tour variable on visiting decision is 0.30 or 30%.

5 Conclusion and Recommendation

5.1 Conclusion

Based on the results of research on the influence of virtual tours on tourists' interest and visiting decisions, the conclusions as follows:

1. The virtual tour variable has an influence on the tourist visit interest and decision, even though the power is not strong (moderate level).
2. The ability of the virtual tour variable to influence the tourists' interest and decision to visit by 34.6% and 30% respectively.

5.2 Recommendation

Although virtual tours have been shown to positively influence audiences to decide to visit or are at least interested in visiting a tourism destination, their influence is not considerable or is classified as moderate. Based on the analysis of the virtual tour component's description, the value in terms of actual experience needs to be increased. A virtual tour, it is commonly believe, can never replace the experience of a physical tour [14, 15]. Nonetheless, there are a variety of efforts and methods that can be used to make virtual tours more real, such as the use of virtual reality rather than desktop version [16].

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Ways of Optimizing the Environmental and Operational Mobility of Passenger Transportation in Megacities

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Abstract. In the modern world, motorization is a central problem of noise generation, spread of harmful substances and respiratory diseases due to the use of internal combustion engines. The consequence of the popularization of one's own car is the formation of traffic jams, which lead to the loss of time that people could use to create the gross domestic product of the state and improve social welfare. The reason for choosing a car is that people live in cities that do not have a sustainable and developed urban transport system, there is no parking space policy, traffic rules are ignored, or the city is densely populated, etc. Even with the right policy, with the existence and implementation of a plan for sustainable urban mobility of the population, it is impossible to completely solve the problem of motorization, so it is worth implementing creative transport solutions.

The purpose of the article is to analyze the level of traffic jams in the world's largest megacities, implemented measures to overcome them, and the level of development of urban passenger transport. Based on these data, the goal is to propose a concept of modular electric buses that will ensure the economic feasibility of using different capacities and types of rolling stock to move people and goods around the city and improve environmental performance.

Keywords: Management · Electric bus · Megacity · Environment · Passenger transport · Automobile transport · Bus transport · Congestion reduction · Modular principle · Environmental mobility · Economic and synergic effect

1 Introduction

The process of increasing the urban population (urbanization) is a historical and unceasing process that creates constant challenges in the matter of mass comfortable, cheap, fast and ecological movement between the points of residence, work or study, recreation and entertainment, food and shopping facilities. These challenges are partially or almost completely solved thanks to the fight against automobilization, which arose and became established as a negative phenomenon of human development in the 20th century, through a clear concept of popularizing municipal transport. Why use your own car

in the city? Leave it in the multi-level parking lot next to the house and change to public transport, which runs strictly according to the schedule, does not stand in traffic jams, because it moves along dedicated lanes. Its services can be paid in advance or directly during the trip in a special application on the phone. Plan things and don't worry that you won't be able to get to the designated place on time. Your choice also allows you to improve the ecological component of the city.

Despite this, city management and city specialists are not always able to replan and rebuild cities for the modern needs of the population, when large sleeping areas are not provided with a sufficient number of jobs and residents have to go to another part of the city, creating a lot of road traffic.

2 Literature Review

Having studied the material about public transport in Istanbul, Tokyo, London and New York, it is safe to say that these megacities have developed perfect transport systems. Their approaches to reducing congestion are classic, justified, but insufficient due to overcrowding. It is difficult to change people's preference for using a car having different categories of people living in the city, with different outlooks and habits that have been formed over the years, and the COVID-19 pandemic has worsened this situation even more because people are afraid of getting sick when using public transport.

3 Research Methodology

The following general scientific methods were used to achieve the research goal and to solve the relevant problems: statistical and comparative analysis - ranking of the world's cities by the level of road traffic, created by the Dutch consumer electronics manufacturer TomTom, which receives data through to the use of its navigation technologies in devices since 2017. They cover 600 million drivers, 404 cities, 54 countries around the world and enable the global community to analyze the information collected over the past 5 years and create a cleaner world without traffic jams.

4 Results

TomTom's website research shows that in 2021, the highest urban road congestion in the world was observed in the Turkish city of Istanbul, where traffic reached 61%, an increase of 11% compared to 2020 [1]. This situation is explained by the fact that the area of the city reaches 5345 km², it is divided by the Bosphorus strait into two parts - the Asian (Anatolian side) and the European (Thracian side). Most of the workplaces are located on the larger side, Thracian, so there is a constant pendulum migration of the population, which is about 15.4 million people, through three road bridges and one underground tunnel, a railway bridge, the carrying capacity of which is limited.

Despite the developed public transport in Istanbul, such as the metro and light rail transport, which has a total of 107 stations, 4 routes of the ground tram, bus routes and metrobuses that run on the ring road with an interval of 30 s, with 45 stops, the city

authorities are unable to solve the problem of motorization due to poor driving culture, traffic violations, lack of parking rules, etc.

As of February 2022, according to the Turkish Statistical Institute (TUIK), 4 million 688 thousand 22 vehicles were registered in the city, of which the largest percentage was passenger cars - 54.3%, pickup trucks - 16.3%, motorcycles – 14.9%, tractors – 8%, trucks – 3.5%, minibuses – 1.9%, large buses – 0.8%, special purpose vehicles – 0.3%. Despite this, the total number of movement participants was 25 million 385 thousand 84 [2].

Let’s display the traffic level of the city of Istanbul in the Table 1 [1].

Table 1. Istanbul traffic level on average for 2021, %, according to TomTom website data

Day Time	Sun	Mon	Tue	Wen	Thu	Fri	Sat
12 AM	25	14	5	6	8	8	14
	13	2	0	0	1	0	4
2 AM	4	0	0	0	0	0	0
	0	0	0	0	0	0	0
4 AM	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
6 AM	0	16	13	12	12	10	3
	0	61	53	51	50	46	9
8 AM	2	93	84	79	79	70	17
	6	76	74	68	69	58	26
10 AM	11	59	64	60	60	54	36
	15	55	62	60	60	57	45
12 PM	22	58	64	63	66	62	56
	31	61	67	66	69	56	72
2 PM	39	67	73	72	76	72	82
	42	73	80	79	83	89	84
4 PM	40	82	88	87	91	99	78
	40	95	100	99	102	108	73
6 PM	40	109	113	112	113	116	70
	37	85	89	88	89	95	64
8 PM	31	46	50	51	51	36	53
	29	24	29	30	30	42	45
10 PM	27	14	19	21	21	29	40
	22	10	12	14	15	22	31

According to the table, the peak rate of traffic jams was observed every Friday, in the evening peak, from 4 to 7 p.m., paralyzing movement on the roads from 99 to 116%. Similar situations were observed on Monday, between 5 and 6 p.m., 95–109%, Tuesday - 100–113%, Wednesday - 99–112%, on Thursday, between 4 and 6 p.m., 91–113%. The only morning overload occurred every Monday around 8 a.m., 93%.

On an annual basis, traffic jams hampered the city the most in March, reaching 70%, and in November – 71%.

We will display complete information for 2021 in Fig. 1 [1].

During the year, car users lost an additional 226 h or 9 days and 10 h on the road when traveling during the peak load period.

Let’s compare Istanbul with similar megacities from different parts of the planet.

The Japanese capital Tokyo, with a population of 13.9 million people and a density of 4,800 people/km², as well as an agglomeration with up to 30 million inhabitants, solves the problem of motorization by means of multi-level interchanges and underground tunnels, limiting the maximum speed to 60 km/h on toll roads and 40 km/h on normal roads, which is monitored by smart sensors installed every 300 m. The data is sent to the main information processing center of the average speed, and significant fines are issued for violations. The situation is similar with parking, when a car can be evacuated for stopping in an unspecified place, since there are enough parking lots in the city.

The authorities notify citizens about the formation of traffic jams through radios, navigators and special applications for motorists, and offer alternative routes, thanks to the presence of 12 ring roads, 8 of which are free.

At the legislative level, benefits have been approved that allow cars with an engine volume that does not exceed 0.66 l and dimensions of 3.4 × 1.48 × 2 m to have a “discounted” yellow state license plate, which allows you to pay less to the budget, than cars larger in power and dimensions [3].

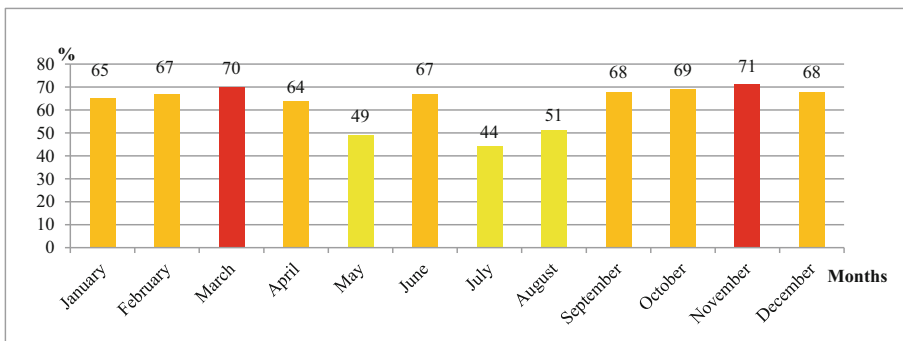


Fig. 1. Traffic level histogram in Istanbul for 12 months of 2021

Public transport is represented by a large network of the metro (290 stations located on 12 lines), railways (18 suburban lines that connect in a network of stations in the territory of 23 districts of the city), one tram line (12.5 km, 30 stops, another network liquidated in 1967) and buses.

An interesting fact is that most employers pay for the travel of their employees by buying them travel tickets as part of the social package.

Tokyo ranks 17th in the world and 5th in Asia for traffic in 2021 with 43%, which is 2% more than the previous year.

The load level of Tokyo city roads is shown in the Table 2 [4].

According to the table, the biggest traffic jams paralyzed the city every Friday, around 8:00 a.m. - 72%, and from 5:00 p.m. to 6:00 p.m. - 70–72%.

The maximum average annual peak load on roads was observed in December – 50%. Let’s display this information in Fig. 2 [4].

During the year, people spent 148 h more on the road due to traffic jams.

The British capital, London, with a population of 8.9 million people, covers an area of 1,572 km², has a developed subway network consisting of 12 lines with 262 stations,

Table 2. Traffic level of Tokyo on average for 2021, %, according to the TomTom website

Day Time	Sun	Mon	Tue	Wen	Thu	Fri	Sat
12 AM	7	5	7	8	8	9	8
	5	4	6	6	8	7	7
2 AM	4	4	5	5	5	6	5
	2	3	5	4	5	5	4
4 AM	1	5	6	6	6	6	4
	1	13	14	13	13	14	7
6 AM	4	42	41	41	39	42	20
	10	67	67	66	64	68	31
8 AM	16	66	67	65	65	72	36
	24	53	55	54	56	63	43
10 AM	33	52	54	53	55	62	54
	38	50	51	51	53	59	59
12 PM	38	44	45	45	46	52	56
	38	42	43	43	44	49	53
2 PM	39	47	47	47	49	54	54
	39	49	49	49	51	58	55
4 PM	40	49	50	51	53	62	57
	38	57	59	60	61	72	61
6 PM	31	54	57	58	58	70	51
	24	35	36	36	37	49	34
8 PM	20	23	24	24	25	32	25
	14	16	17	17	17	21	18
10 PM	9	11	12	12	12	14	12
	7	9	9	10	10	11	9

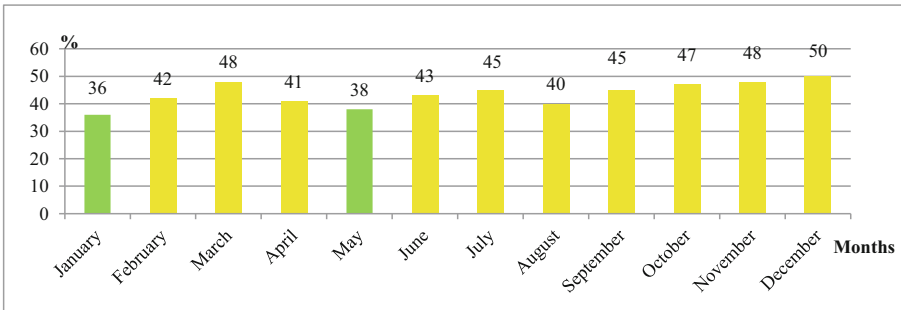


Fig. 2. Traffic level histogram in Tokyo for 12 months of 2021

a popular network of routes served by double-decker buses, the Tramlink tram system (4 routes, 28 km).

The trains connecting Greater London with its suburbs are sometimes called the above-ground part of the subway. London Overground is an independent transport system that connects 8 routes and 83 stations mainly in the western and northern parts of the city. Half of the routes depart from the Highbury area.

The light railway (Docklands Light Railway or DLR), on the other hand, is considered part of the London Underground. It is an important transport artery in the eastern part of the city, which was created to serve Dockland (an office and white-collar area). DLR

currently includes 45 stations on 7 routes; some stations connect to subway lines. DLR trains are operated automatically, there are no drivers.

The city is divided into 6 main zones. The fare takes into account the crossing of metro zones - the more zones covered by the trip, the more expensive the fare. You cannot leave the paid zone, for control, the one-time ticket must be kept until the end of the trip [5].

The city ranks 55th in the world and 32nd in Europe in terms of road congestion with an indicator of 33%, which is 2% more than in 2020 [6].

London has been combating congestion by charging fees for movement in the central part of the city since 2003, and since April 8, 2019, this decision has been supplemented by new environmental restrictions. An amount of £12.5/day has been added to the already existing charge of £11.5 if the car is over 4 years old and runs on diesel fuel, or if it is over 13 years old on petrol. In general, you will have to spend 24 £/day to use the roads of the center [7].

The level of loading of the roads of the city of London is shown in the Table 3 [6].

Table 3. London traffic level on average for 2021, %, according to the TomTom website

Day Time	Sun	Mon	Tue	Wen	Thu	Fri	Sat
12 AM	14	7	5	6	7	8	12
2 AM	10	3	2	3	3	5	9
4 AM	7	1	1	1	2	3	6
6 AM	6	0	0	0	1	1	4
8 AM	2	0	0	0	0	0	2
10 AM	0	1	1	1	1	1	0
12 PM	0	16	17	17	16	14	2
2 PM	2	40	43	42	40	34	7
4 PM	5	48	54	53	50	43	12
6 PM	11	34	39	38	37	34	21
8 PM	18	30	32	33	33	34	31
10 PM	27	32	33	34	35	40	40
12 AM	35	34	35	36	37	45	47
2 AM	36	34	35	36	37	46	48
4 AM	33	36	37	38	40	51	44
6 AM	30	43	45	47	49	62	39
8 AM	28	44	49	51	53	64	36
10 AM	28	45	50	53	55	62	34
12 PM	27	36	40	44	46	53	32
2 PM	23	24	26	29	31	38	28
4 PM	19	17	18	19	21	26	23
6 PM	14	13	14	15	16	19	19
8 PM	12	11	13	14	16	18	18
10 PM	10	8	10	11	13	16	17

According to the table, London traffic jams peaked from 3 p.m. to 5 p.m. - 62–64%, so at this time it is worth giving up your own car or taxi services.

People spent 119 h in traffic jams if they used their own car.

The maximum average peak traffic was observed in November – 39%. Let's display the complete information for 2021 in Fig. 3 [6].

New York has a well-developed network of public transport, which allows not only to get anywhere in the city without problems, but also to get to satellite cities or the nearest agglomeration.

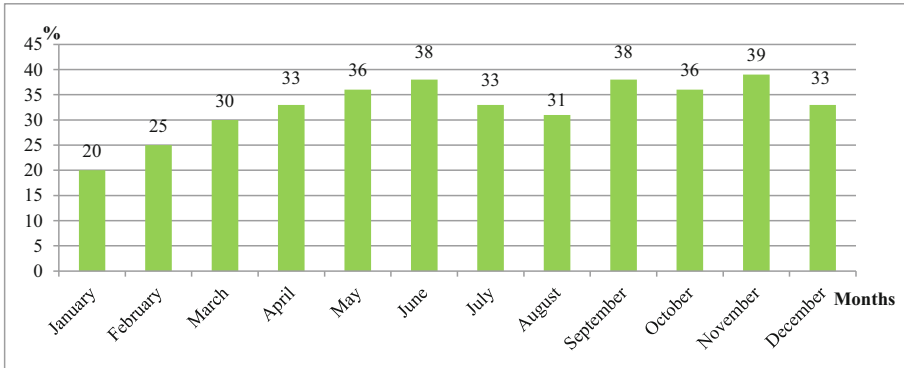


Fig. 3. Histogram of the level of traffic in the city of London for 12 months of 2021

The largest carrier is the Metropolitan Transportation Authority (MTA), which includes subway, bus routes and commuter rail operators.

The metro has 472 stations. Each line is marked with a letter or number. In Manhattan, almost all lines go north (uptown) or south (downtown). Therefore, in order to reach the Queens and Bronx areas, you need to follow the first direction, and in Brooklyn - the second. Directions are indicated above the entrance to the station. If there is no such inscription, then the trains go in both directions.

Local trains stop at stations marked with a black dot, and express trains stop at those marked with a white dot. It should be taken into account that the first type of train stops at every station, the second - only at some of them.

Another type of low-cost transportation in New York is the buses that run throughout the city. The route number and final stop are indicated above the windshield of each. If the marking of the bus starts with B - it runs through Brooklyn, Bx - Bronx, M - Manhattan, Q - Queens, S - Staten Island. You can also see buses marked SBS (Select Bus Service) on the streets of the city. This means that there is an increased level of comfort on the route, and the travel time is minimal. The main feature of such transport is that the fare must be paid before boarding. There are also express bus routes. You can recognize them by the letters M or X added to the main number. The exception is only buses in the Manhattan direction, where there are no express trains. Drivers stop only on request. To stop the bus, you need to raise your hand, and to get off, press the stop request button. Also, buses of other companies run through New York, which usually allow you to go outside the city.

Two railroads pass through New York - the Long Island Rail Road and the Metro-North Railroad.

The Long Island Rail Road is the oldest railroad in the United States. It consists of 11 lines that stretch from Manhattan to Suffolk County on eastern Long Island. The main terminals are Penn Station, Atlantic, Jamaica.

Metro-North Railroad is a commuter rail network with five lines heading north of the city on both sides of the Hudson River.

The legendary yellow taxis, which are one of the causes of traffic jams in New York, operate on almost all streets of the city [8].

New York plans to introduce a congestion tax. Motorists entering midtown Manhattan will be charged once a day. Drivers will pay \$23 during peak hours, and the night rate will be \$5. The tax is expected to reduce the number of cars in Manhattan, which is considered the most congested area in the United States, by 15–20%. At the same time, the load on public transport will increase by only 1–2%.

It is assumed that the tax will provide the New York Metropolitan Transportation Authority with \$15 billion in revenue over four years. These funds will be used to develop municipal transport.

Approximately 7.7 million people visit Manhattan’s central business district every day, of which 1.85 million enter by car. Traffic slowed down in the center to 11.4 km/h. This costs the average New York City driver 102 h of wasted time each year.

A number of peak hour tolling scenarios are proposed. For example, in one of them, vehicles such as taxis and transit buses will be completely exempt from tolls. The fee for entering Manhattan will not be introduced until the end of 2023. The New York State Legislature approved the conceptual plan for this reform back in 2019 [9].

Meanwhile, the city ranks 2nd among North American cities and 43rd in the world in terms of traffic congestion – 35%, which is 9% more than in 2020.

The level of loading of New York City roads is shown in the Table 4 [10].

Table 4. Average traffic level of New York City in 2021, %, according to the TomTom website

Day Time	Sun	Mon	Tue	Wen	Thu	Fri	Sat
12 AM	12	7	6	7	9	9	13
	7	4	4	4	6	6	8
2 AM	5	3	2	3	4	3	5
	3	1	1	1	2	2	3
4 AM	2	0	0	0	0	1	2
	0	4	4	4	4	4	1
6 AM	0	19	20	20	21	18	3
	1	35	37	37	38	31	7
8 AM	4	40	44	43	45	37	12
	9	32	35	36	39	32	18
10 AM	15	29	32	33	36	33	26
	22	30	33	34	37	37	34
12 PM	29	32	34	35	38	41	41
	35	34	36	38	41	47	44
2 PM	38	41	44	47	51	60	47
	39	48	53	56	61	72	47
4 PM	38	51	57	60	66	77	45
	36	50	58	62	69	74	42
6 PM	34	38	45	49	56	60	39
	32	24	29	32	39	43	33
8 PM	29	18	21	23	28	32	29
	25	14	15	17	20	24	24
10 PM	18	12	13	15	16	20	21
	12	9	11	12	13	17	17

According to the table, it was problematic to use a car without getting into a traffic jam in the period from 3 to 5 p.m., every Friday, 72–77%.

Car owners spent 119 h more per year on trips.

On an annual basis, October turned out to be the most unfavorable month for traveling by own car, while the average traffic figure was 43%. Let’s show the full information for 2021 in Fig. 4 [10].

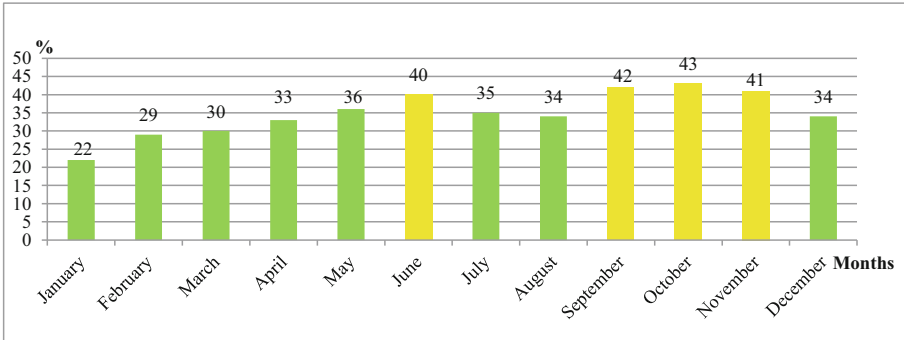


Fig. 4. Histogram of traffic levels in New York City for 12 months of 2021

The given tables of the hourly traffic of the roads in the world’s major metropolises of Istanbul, Tokyo, London, and New York convincingly show that there is non-stationarity in the flow of passengers by hours of the day, days of the week, months of the year, and, as can be seen from the histograms, the uneven traffic congestion of city highways. And this problem will not be solved by itself. On the contrary, the increase in the population of megacities is a progressive phenomenon and leads to an increase in traffic problems. Reloading city roads leads to environmental and social problems. We have to fight this.

The analysis shows that the management of the world’s megacities have different approaches in the fight against traffic jams, but they solve the problem of popularity and the use of private vehicles instead of public transport only partially, that is why, for example, the EU has approved a hydrogen strategy that will allow to gradually abandon the use of fossil fuels and completely switch to green technologies.

The EU’s hydrogen strategy envisages the widespread use of hydrogen as an energy carrier for those sectors that cannot be electrified and aims to reduce carbon dioxide emissions by industrial facilities, transport, energy, construction, etc. to zero. After all, hydrogen is a fuel, during the combustion of which water is formed, and its widespread use should become an important means of decarbonization (rejection of the use of fossil hydrocarbons - coal, gas, oil, etc.) of the EU economy.

The production of so-called renewable hydrogen, i.e., obtained by electrolysis at the expense of renewable energy sources, mainly wind and solar energy, is a priority for the EU. From 2025 to 2030, it is planned to increase the capacity of electrolyzers in the EU to 40 gigawatts, and the annual production of hydrogen to 10 million tons. By 2050, the production and use of hydrogen should increase even more. In particular, it is assumed that it will be used as a means of balancing the electricity system (daily and seasonally) based on renewable energy sources. By 2050, about 20% of renewable electricity can be used to produce renewable hydrogen.

The EU’s hydrogen strategy predicts that the total investment in renewable hydrogen in Europe could be between 180 and 470 billion euros by 2050. According to analysts’

estimates, by 2050, hydrogen can provide up to 24% of the world's energy needs, and its annual sales will amount to 630 billion euros.

In order to implement the Hydrogen Strategy, the European Commission created the European Clean Hydrogen Alliance, which includes enterprises, public organizations, ministries and the European Investment Bank. The presentation of this alliance took place on July 8, 2020.

Thus, a real energy revolution is beginning in the EU. And not only energy. The above-mentioned strategies envisage significant changes in all sectors of the economy, in the way of life and in achieving a new quality of life [11].

The new quality of life involves the gradual introduction and implementation of the principles of ecological mobility - a system of green economy standards that provide for the transition to ecologically safe transport that is gentle on the environment. These principles allow the population not only to sort garbage, but also to use the expected urban environmentally friendly electric transport, to use and create new renewable energy technologies, saving time and money. The concept of ecological mobility allows and forces the use of vehicles both structurally and operationally, preserving and protecting nature and the environment.

We propose to implement ecological mobility in the field of urban bus transportation and other public utilities, introducing, together with ecological and operational mobility, the possibility of reducing the critical load on city highways and traffic jams on them through the rational use of rolling stock of different passenger capacities and the introduction of a modular principle that allows the use of universal bus electric locomotives, bodies of various classes and lengths, both passenger and cargo. This will make it possible to reduce traffic jams on highways, driver labor costs, reduce emissions of CO₂ and PM_{2.5} fine particles, reduce the number of respiratory diseases among the population, etc.

The concept of modular application of electric buses involves the combination of an electric tractor and electric passenger trailers to it [12–15]. In order to save money, a multifunctional electric universal tractor can act as an electric tractor, and as an electric trailer - a large-capacity rolling stock for the transportation of passengers.

During a work shift, trailer-modules with different passenger capacities can be attached to the electric tractor. During peak hours, it should be a large-capacity rolling stock, in the evening and at night - a low-capacity one. Based on the needs of passenger transportation, modular electric buses can be conventionally divided into three groups by passenger capacity (Fig. 5) [13]:

- small (small capacity, up to 10 m, with a passenger capacity of 30–50 people),
- medium (middle capacity, 12–15 m, with a passenger capacity of 50–100 people)
- large (large capacity, over 22 m, with a passenger capacity of 100–150 people).

That is, depending on the passenger flow, the city carrier will be able to adjust the capacity of the rolling stock, choosing small capacity, middle capacity or large capacity salons, thus rationally using the rolling stock. Each such electric machine must consist of a tractor and possible modules, which are alternately attached to the electric tractor. Each module will have its own battery and will be powered independently of other modules. The modules will stand at the end points of electric bus turnover, where

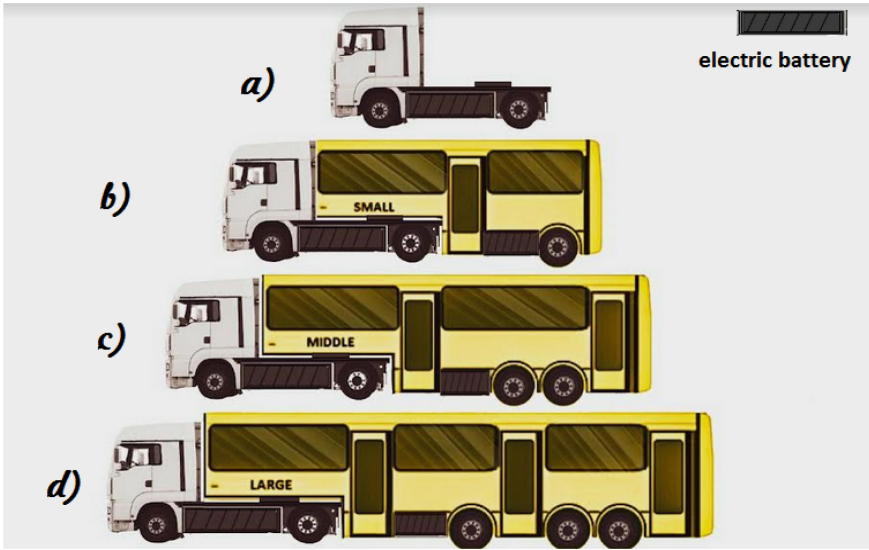


Fig. 5. Organization of the modular principle of the formation of a passenger electric bus: a) electric modular truck, b) small capacity, c) middle capacity, d) large capacity salons.

they can be recharged at special charging stations. At the moment, the efficiency of recharging electric trailer batteries depends on the type of battery and, based on this, there are opportunities to use fast charging. Also, the charge level, and as a result, the power reserve, when the air temperature is below zero, can be much lower than usual. Since winters can be quite cold in some regions of the world, it makes sense to develop batteries that would be resistant to extreme climatic conditions.

The batteries of the electric tractor during the day shift can be recharged from the batteries of the trailers. In turn, electric trailers, when idling while waiting for their turn to go to the line, must be constantly charged. This will ensure continuous operation of tractors, which will constantly receive electricity from “fresh” trailers.

In general, if you correctly calculate and effectively optimize the number of electric tractors and rolling stock of electric trailers, taking into account the non-stationary passenger flow, it is possible to achieve a minimum downtime of electric tractors at the points of turnover of electric buses. That is, choose the optimal number of rolling stock, which will minimize the length of time you have to wait for battery charging. In the morning and evening peak hours, the electric tractor must transport large-capacity electric trailers, in the off-peak period - medium-capacity trailers, and in periods of low passenger traffic (late evening and night time, weekends and holidays) - low-capacity trailers. The number and composition of rolling stock in each hour on the route must be determined taking into account a complex of factors: traffic congestion, the state of environmental pollution on the route, non-stationary passenger flow, seasonality, days of the week, hours of the day, etc. Such a modular system will make it possible to flexibly respond to the needs of changing the passenger capacity of the rolling stock of electric buses during the work shift. The number of truck tractors and their drivers (in the long

term, the automated use of electric buses without drivers at all is possible) with the modular principle is less than the total number of electric trailers, which leads to a significant reduction in the total cost of passenger transportation and the economic efficiency of the system [12].

Effective use of the proposed modular system also involves a synergistic effect from the non-passenger use of electric tractors - for work with cargo, utility, service and special trailer-modules (Fig. 6).



Fig. 6. Other freight possible usages for modular electric trucks: a) electric truck; b) electric trash truck; c) electric dump truck; d) electric tank truck.

5 Conclusions

Ecological mobility involves the mass use of electric cars and the transfer of passenger road transport to electric bus rolling stock, which will significantly reduce environmental pollution and reduce the “greenhouse effect”. The positive environmental effect of electric traction can be complemented by an innovative modular system of using electric bus tractors and electric trailers of various passenger capacities for route transportation in metropolitan cities. The automotive industry must face the task of developing a type of modular electric rolling stock. Operational mobility when using multi-capacity passenger vehicles will allow to significantly reduce the costs of operating bus fleets and rationally decongest the roads of megacities. The synergistic effect of the modular application of the type series of electric locomotives will allow their use not only in passenger transportation, but also in cargo, communal, food, special and other types of road transportation, which will significantly increase the efficiency of motor vehicles.

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Analysis of the Potential of Tourism Restorative Destinations to Overcome Health Disorders Due to Work Fatigue

(Study on Perceived Destination Restorative Qualities (PDRQ) in the Context of Tourism)

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Abstract. The tourism industry is greatly affected by environmental changes. Especially after the world went through the Covid pandemic era, people prefer doing healthy tourism. The daily workload, the increase in education and welfare have resulted in a shift in the trend of tourism choices. People are increasingly considering the fulfillment of work-life balance. This study is designed to examine the elements contained in the measurement of the restorative quality of destinations known as “*Perceived destination restorative quality (PDRQ)*”. PDRQ consists of four elements, namely *being away*, *extent*, *fascination*, and *compatibility*. These four elements will be tested for their effect on the overall restorative impact and visitor satisfaction. A quantitative study will be conducted in Indonesia with tourism objects in Jogjakarta and Central Java covering rural and urban areas. SEM statistical analysis tools will be used to test the validity and reliability of the data collected. This research will enrich the literature review in the field of health tourism and for managers will be useful to further broaden the perspective of offering tourism program that has more restorative impacts.

Keywords: Restorative destination · Restorative quality · Recovery and tourists’ satisfaction

1 Introduction

The rate of economic growth and global competition makes the workload heavier. The working hours often have to be extended to meet the target. Research from the US Families and Work Institute identified that one in three American workers are considered chronically overweight [1]. Conditions in Indonesia are also not much different, economic growth and high work pressure increase the number of people with mental emotional disorders. Increasing workloads and demands trigger health problems due to accumulated work fatigue. This phenomenon needs immediate attention and anticipatory action, because if left uncontrolled, it can reduce the productivity and performance of employees (community) and increase government health expenditures.

The tourism sector is currently showing a shifting trend from sightseeing experiences to healing and recovery oriented tourism. This shift in tourism motives cannot be separated from global conditions where economic growth is increasing and job demands are also increasing. As a new lifestyle, global recreation has increased [2] supported by advances in technology, education and the economy. The interesting thing is that the trend of tourism and vacation travel (leisure vacation) has changed where previously the motivation for vacationing was more for sightseeing to being a vacation for relaxation and health [3]. People are increasingly concerned about the importance of life balance (work and rest/relaxation) and the fulfillment of a healthy lifestyle. Tourist attractions with natural nuances that give the effect of relaxation and togetherness (social relationships) are increasingly in demand [4]. Places that are most favorite to visit include: nature tours, flower gardens, fruit gardens, outdoor, or hotels and restaurants that provide a natural atmosphere and fresh air (green environment) that can provide a relaxing effect.

The shift in travel motivation that leads to the improvement of health has begun the interests of multidisciplinary scientific research such as in the fields of tourism, environmental psychology, health, business and architecture. Taking into account the definition of health according to the World Health Organization (WHO) "health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". This means that health includes mental and physical health as a whole. There is no health without mental health. Good mental health makes people realize their potential, are able to cope with the normal stresses of life, work productively, and contribute according to their capacity in their environment.

This study aims to examine and analyze the quality of restorative destination elements relationship to the overall recovery and visitor satisfaction effects. The research will be tested in remote tourism objects and urban/city objects in Yogyakarta. From the research, it is hoped that an increase in the understanding of the restorative effects of destinations by tourism managers will be achieved as well as the optimization of vacations as a means of recovery and improvement of mental health. It is hoped that this research will contribute to the addition of the completeness of the literature in the field of tourism marketing that emphasizes restorative and wellness aspects. For managers/marketing practitioners, this research provides overview of the shift in the community tourism trends that lead to the search for health tourism (health and wellness tourism) that need to be seized by optimizing community capabilities, management and natural potential.

2 Literature Review

2.1 Fatigue, Restoration and Vacation

Fatigue due to work (work-related fatigue) is a common phenomenon and to a certain degree can be overcome after a person has enough rest [5]. Continuous fatigue will lead to reduced health, increased number of employee absenteeism and decreased productivity [6]. Recovery is defined as "the renewal or restoration of capacities (physical and mental) that have previously decreased due to the daily heavy work" [7]. Recovery can be done in a variety of ways, from short breaks for lunch outside the office to long vacations away from one's home location [8]. Prolonged fatigue requires a longer recovery termed

as macro-recovery [9]. Vacation is a certain period that people use to take a break from work, school or routine activities [10]. If the burden of daily tasks and work reduces a person's ability and performance, taking vacations can improve both physically and mentally [11].

2.2 Restorative Environment and Its Characteristics

Restoration is defined as the source of recovery or capacity for renewal that can decrease due to the demands/loads of daily work [7]. One of the pioneers of restoration theory is Attention Restorative Theory (ART) which was developed by (Kaplan [12, 13]). This theory states that attention that is forced (directed attention) intensively and continuously can cause fatigue in the function of body mechanisms. Recovery of body functions is very possible when people with fatigue problems are placed in an environment with a calming arrangement (effortless). Otherwise, recovery known as a condition of "involuntary attention" or "undirected attention." According to ART theory, an environment that can facilitate the reduction of fatigue is a restorative environment [10]. To be more conducive to a recovery effect, Kaplan and Kaplan in [14] emphasize the fulfillment of four quality elements, namely *being away*, *extent*, *fascination*, and *compatibility*. The "*being away*" component is a condition where a person can get away from the stresses of daily life, routine work and thoughts. Being away is considered to be the first condition that must be met for recovery which is often done by moving/traveling to a different place/situation [15]. "*Extent*" refers to the setting which is the content and structure of the restoration to free the human mind for a sufficient period to make directed attention rest [12]. Fascination is a component in which the restorative environment must provide an effortless effect to do something pleasurable. Compatibility is the suitability (fit) between individual motives (visitors) and the facilities provided from the destination (tourist object). Overall, the four components in the vacation will be examined to tourism (visitors) in order to obtain restoration properties, so that visitors get a restorative experience that helps recovery from fatigue.

The tourism sector has a significant complexity as compared to other industrial sectors. Therefore, Kirillova and Lehto [13] add four restorative components to six and are known as "Perceived destination restorative quality (PDRQ)". The two additional elements include separating the element of being away from ART into "*being away mentally*" and "*being away physically*". The six dimensions of PDRQ in the research of Kirillova and Lehto [13] are able to significantly affect the satisfaction of visitors who seek a restorative effect so that they can be a measure of the restoration of mental function of visitors/tourists.

2.3 PDRQ, Recovery and Visitor Satisfaction

Destinations that provide healing effects need to have restorative quality. PDRQ - Restorative environments are those where environmental elements can facilitate the recovery of decreased human capacity/resources due to the pressures of daily work activities [7]. PDRQ is currently widely used in tourism and health research as a measure of restoration quality. PDRQ research in the field of tourism and health [11] has

been proven to be able to provide an overall recovery effect. Overall Recovery is an individual’s ability to recover from various mental health disorders such as fatigue, anxiety and physical health disorders [10, 11, 14].

Therefore this research proposes the following:

H1: Perceived destination restorative quality (PDRQ) positively affects the tourist recovery effect.

People’s motivations for vacations are vary widely, but in the context of a vacation, the main reason is often for rest and relaxation [15]. The environment perceived by visitors for ability to provide a healing (restorative) effect can further contribute to satisfaction with their experience at the destination/tourist object. Vacation opportunities can reduce work-related burnout ([16], improve health [17], energy levels and life satisfaction [6]. In this tourism context, complete restoration is the basis of visitor satisfaction from the holiday experience. Research [6, 14, 19]) has proven the influence of PDRQ elements and overall recovery on visitor satisfaction. Visitors’ satisfaction is a condition where visitors’ expectations can be met by service performance or good physical condition of objects ([11]. Hence this study hypothesizes the following:

H2: PDRQ has a positive effect on visitor satisfaction,

H3: Overall restoration affects visitor satisfaction (Fig. 1).

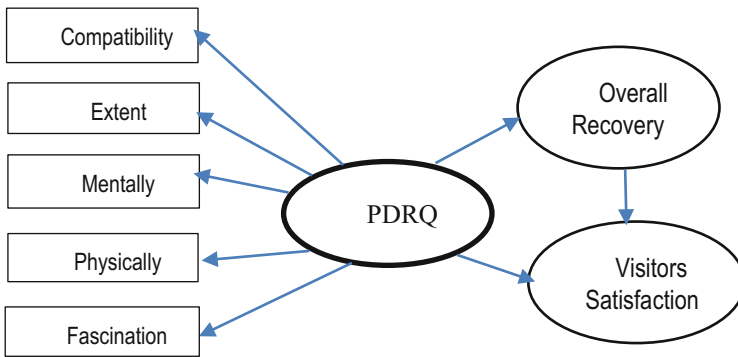


Fig. 1. Research framework

3 Research Methodology

3.1 Research Location

This research will be conducted in Indonesia, especially tourism destinations in Java because it is one of Indonesia’s main tourist destinations that meet the restorative criterias (recoveries). The selection of research objects is determined based on the judgment of researchers and experts in the field of mental health and tourism management. Two groups of criterias for different research objects, namely natural tourism objects and urban tourism objects (within the city) will be analyzed to see the differences in the effects of the recovery. Natural tourism objects cover beaches, mountains, forests or

flower gardens. Urban tourism respondents are carried out by distributing surveys in hotels, hospitals, cafes, or universities.

3.2 Research Design, Population, Sample, Sampling Techniques and Statistical Techniques

This study uses a Mixed Method approach, namely using qualitative approach and quantitative approach [20]. The Mixed Method approach is carried out using the Sequential Exploratory Mixed Method, which is a research procedure in which researchers develop research results from one method to another. This method is said to be sequential because of the use of methods that are combined sequentially. In this study, the first order uses qualitative methods and the second uses quantitative methods. Research with a qualitative approach was carried out in order to prepare a questionnaire that was in accordance with the conditions of the respondents based on local culture.

The population is all tourists who vacation in the selected target location. The sampling method chosen is purposive sampling with the stipulation that: 1. Respondents had visited the objects determined by the researcher and 2. Respondents were at least educated or currently studying high school. The sample plan required is about 300 respondents representing two groups of locations, namely nature tourism and urban tourism. The target number of samples required is in accordance with the advice of Hair, [21], where quantitative research to be tested using structural equation modeling must meet the minimum standard of the number of respondents according to the provisions of the statistical test equipment used. The statistical analysis tools used are SPSS and SEM [21, 22]. The technique of compiling the scale used is the Likert scale, where the alternative assessment numbers in this study are from 1 (strongly disagree) to 7 (strongly agree).

4 Discussions and Conclusion

4.1 Discussions

This study is designed to analyze the four elements of restorative quality measurement known as *Perceived destination restorative quality* (PDRQ). The restorative quality which includes four elements, namely being *away*, *extent*, *fascination*, and *compatibility* will be analyzed in the context of tourism in Indonesia regarding their impact on restorative ability and tourist satisfaction. Restorative ability in this case is the ability of tourist destinations to provide a recovery effect from feeling tired, stressed or looking for a calming relaxation atmosphere after days of experiencing a build up of workload stress. The cultural aspect in this case is important to observe because each culture in responding to restorative perceptions can be quite different.

Indonesian society, can be categorized as having an eastern culture that emphasizes collectivism. According to Hofstede's (1980) survey on National Culture, Indonesian tends to prioritize togetherness as a way to get happiness/relaxation. It could be that people from western countries will appreciate individual activities such as fishing more or climbing mountains in the open area to get a serenity and relaxing effect. This restorative

impact measurement tool known as *Perceived destination restorative quality* (PDRQ) when tested on different cultures will allow it to be addressed in different ways, so that the four elements will have an overall restorative impact effect and the impact of satisfaction is different in each different country.

Being away as described by Hartig [7] is the first condition that must be met for recovery which is often done by moving/traveling to a different place/situation. For recovery, a person needs a new atmosphere that is different from the conditions of the office where they work every day, where employees experience a lot of work pressures. Likewise, families also need a new atmosphere that is different and not boring to stay away for awhile from the conditions at home with the various obligations of each members of the family. This also applies to students who need a different atmosphere than the school or campus where they study. This being away element does not have to be leaving to a remote location or out of town. Just go to a place that gives a different atmosphere. For employees, many of them after work go to a cafe before returning home. At the cafe they can unwind or meet friends to communicate with each other cheerfully. The family at the weekend decides to stay at a hotel or to a tourist destination to get a different atmosphere. There are those who like to travel at the mall for shopping or rides in the city. On the other hand, there are also those who choose to visit natural destinations that are outdoor. They choose to trek to the mountains or to the beach to get fresh air and encourage physical movement.

Being away is divided into two different things, namely physically away and mentally away. Physically away is more defined as traveling to a different geographical location. It can be in one city or outside the city or abroad. Mentally away is more about moving from place to place where the contents are different activities, different people or different kinds of people. For example, someone traveling to a place of worship, then someone hopes they will meet people who can support the healing energy or a place of worship is often interpreted as a place that gives the feel of a close relationship with their God.

This study considers it important to distinguish between destinations located in rural and urban areas because they are very likely to be perceived differently regarding their impact on recovery and satisfaction. The trends in society regarding the choice to get recovery is an issue that must always be followed by tourism business managers. After the pandemic ends and the world is considered to have been able to get through this pandemic, the choice of destinations that are trending in Indonesia are natural, beach and outdoor destinations. Even today, many cafes are built using the outdoor concept. Destinations that do not pay attention to natural, healthy and relaxing aspects are currently experiencing a decrease in the number of visits. Visitors feel uncomfortable when they have to be squeezed with other people, especially in a closed room.

“Extent” refers to the setting which is the content and structure of the restoration to free the human mind for a period of time, sufficient to make directed attention rest [12]. Destinations cannot be separated from humans or the people who occupy them. People in a place live for generations to adapt to environmental conditions. They will form a culture that develops from generation to generation and provides cultural richnesses that is different from other community groups in different geographical locations. The culture attached to this geographical area provides the content and structure of the restoration because it is considered capable of liberating or providing a different atmosphere for

people from different places with their daily lives. For example, the recovery effect can be given by staying a few days in a destination that specifically provides meditation or Yoga exercises for relaxation and restoration.

Fascination is a component in which the restorative environment must be provided in an effortless way or by doing something pleasurable. Finding something fun is quite a subjective condition. An object that is pleasing to one person is not necessarily pleasant to another. A restorative destination should be able to offer something that touches the emotional side so that people can be happy. Fascination will usually be more achievable if tourists are involved in these tourist activities. For example, activities that are quite popular are outbound or soft bond. This activity requires a team of trainers who can make a person put the burdens of his life aside. Do destinations in the city have a more fascination impact than in the village? Of course this question needs to be tested empirically. Because fascination is very subjective among humans, it is also necessary to find out the extent of the impact of this fascination (on urban or remote objects) on the possibility of restorative and visitor satisfaction.

Before deciding to visit, tourists should have built expectations. If expectations are not met at the destination, then they do not have enough restorative impact and are further dissatisfied with the destination's services. By responding to the shift in tourism trends that the purpose of traveling is to get a recovery and relaxation impact, creativity to create a fascination effect needs to be considered. This can be done through marketing research to find out who is visiting, then segmentation targeting and positioning are made according to the field research.

Compatibility is the suitability between individual motives (visitors) and the facilities provided from the destination. This is the same as in the satisfaction theory, where consumers will be satisfied if their expectations are met in reality. So in order for a match to occur, companies need to their strengths and weaknesses as well as opportunities and threats. This is to be optimum in serving the market, where opportunities and threats are studied and then prepare the company's capabilities according to existing conditions. If the company is successful, the company's internal strength will grow stronger. This matching process is very important because often companies simply follow the trends that occur in the market without examining the capabilities of the organization. This can result in an excessive workload because it is forced to serve unlimited market opportunities.

5 Conclusion

This study pays attention to an interesting phenomenon in the tourism sector where the motivation to travel is now more due to factors seeking the impact of recovery and health. Concern for physical and mental health is getting more and more attention, especially since it has been two years since the global community has been struggling with the COVID-19 pandemic.

The tourism industry is greatly affected by environmental changes. Especially after the world went through the Covid pandemic era which made many people like healthy tourism. The current workload and the increase in education and welfare have also resulted in a shift in the trend of tourism choices. People are increasingly considering the fulfillment of work-life balance. This study was designed to examine the elements

contained in the measurement of the restorative quality of destinations known as “Perceived destination restorative quality (PDRQ)”. PDRQ consists of four elements, namely being away, extent, fascination, and compatibility. These four elements will be tested for their effect on the overall restorative impact and visitor satisfaction. By using quantitative methods, this study will explore primary data directly from respondents to respond the elements in the PDRQ for two forms of tourism design, namely urban destinations and remote destinations. It is hoped that this study will contribute to an in-depth literature review regarding the relationship between PDRQ measurements, health and recovery. In managerial terms, this research contributes to understanding a person’s motivation to visit destinations that offer restorative facilities as well as health facilities.

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Case Study of Pasirmulya Subdistrict, West Java, In-donesia as a Model for Analyzing the Development of a Tourist Village

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Abstract. Rural resources can generate economic activity in rural regions. The tourism village is a sort of rural exercise with significant growth potential. West Java's Pasirmulya subdistrict features several intriguing tourist attractions, including Puntang's world-renowned coffee. This study attempts to enhance the viability and utility of rural tourism for locals. This research aims to explain the community tourist development experience. A qualitative technique using a case study methodology is used in this research. There were fifteen significant sources questioned in detail. According to the study findings, the Pasirmulya sub-district development might serve as a pilot project for a coffee tourist village based on the area's potential, with enough support and infrastructure to create a new idea for a coffee tourism village. This study is essential for locals who want to develop local goods from a tourist standpoint. This achievement is anticipated to serve as a model for other communities.

Keywords: Pasirmulya · Coffee · Community-based tourism · Development · Tourist village

1 Introduction

A tourist village is one of the activities available in rural Indonesia [1]. It is a decentralized development model based on the tourist village, which aims to alleviate economic inequality [2]. The notion of rural tourism will give local governments direct revenue [3]. Rural tourism provides tourist items that may be obtained in the city or a portion of the village [4]. A substantial economic expansion determines the success of the growth of a tourist town. Significant economic growth necessitates the ingenuity and potential of people, natural resources, technology, and culture [5]. The variety of a tourist site may consist of local culture, distinctive cuisine, natural resources, the environment, agricultural systems, and social systems [6].

In the Mount Puntang region, the subdistrict of Pasirmulya in the Bandung Regency of West Java contains eleven villages with vast coffee plantations and high-quality coffee. The coffee field is around 100 hectares in size, and the quality of Puntang coffee received first place in the 2016 International Coffee Championship in Atlanta [7]. The vast majority of inhabitants are farmers and coffee processors. They are adept at planting, harvesting, and processing coffee. The renowned Puntang coffee-producing region's concerns at the Atlanta festival have not been brought to the attention of regional, national, or even international authorities. The provincial administration has been unable to do this in the past; therefore, the proportion of tourist visitors has always been low. Puntang coffee, which has excellent quality and tradition of coffee producers, is utilized as a concept and progress because visitors are abandoning the environment of contemporary tourism and embracing natural tourism (return to nature), which is rich in culture and history (culture and tradition).

The government program outlined in the National Strategic Plan of the Ministry of Culture and Tourism conducts the rural tourism program to enhance visitor arrivals, particularly from outside. Tourism development in rural regions should be a strategic goal if rural economic diversification is to be supported.

This paper is titled *Analysis of the Development of a Tourist Village: A Case Study of Pasirmulya Subdistrict, West Java*. The purpose of this study is to characterize the potential development of a tourist village and apply it to the development of the potential of traditional Sundanese-based rural tourism communities in West Java. The research gap in this study complements rural tourism development in West Java.

The site of the inquiry is Pasirmulya Subdistrict in West Java. This study is anticipated to bridge the village community's desire to bring coffee and culture and the local government's support for eventual implementation. Second, to use the Pasirmulya District as a test site for the Coffee Tourism Village floating project. The success of the Pasirmulya subdistrict as a pilot initiative will snowball effect on other places with varying potential. The paper's structure is as follows: The section first provides an overview of rural tourist views. The second portion examines the research methods, and the third piece provides the findings together with a short explanation of the emphasis of this study: the lack of a significant number of facilities in this region, which makes it imperative to find ways to assist rural tourism. Then, in section four, this research's conclusion proposes a way to develop the potential of coffee-based tourist cities and implements the findings in the corridor of coffee-based tourism's potential development in West Java.

2 Research Method

This study employs a qualitative approach and the case study technique to investigate and explain the experience of community tourism development (CBT), focusing on the engaged players. This study will use this methodology to determine the uniqueness of building a tourist village in the Pasirmulya subdistrict. It intends to demonstrate the importance of collaboration between organizations in developing community tourist villages. Therefore, this case's lessons can only be applied to rural tourism with comparable features. This research gathered information via in-depth interviews between March and July of 2021. Informants were chosen deliberately.

A total of 15 key informants were interviewed in-depth: consisting of (1) local communities, namely informal community leaders (2); tourist village managers by the name of Pokdarwis (3); youth organizations (4); the village government, namely the head of the district and the head of the village (5); academics or researchers from the Bina Nusantara University (6); coffee producers. This research uses focus group discussions and in-depth interviews to collect information from respondents.

The following describes the steps required to execute this study's activities: The first stage in building tourism coffee villages is to examine the region's situation by gathering data to interpret better rural circumstances, which will be the primary purpose. The second phase is creating a strategy for the current commercial tourist circumstances. This situation is unique, necessitating a strategy distinct from other industrial domains. This subsector relies on agricultural development potential-based human resources. Obtaining, controlling, evaluating, and empowering information about the performance of the workforce in the agricultural sector to minimize uncertainty and encourage the development of coffee-based tourism communities constitutes the third phase. Implement a tool for measuring the agricultural workers' potential and degree of preparedness, which is the fourth phase. It is anticipated that this tool will assist local governments in describing the possibilities for building tourist settlements. The fifth phase is for the local government to define human resource policy. The last phase is assessment, which comprises reviewing all agriculture sector performance. Once the findings are acquired, they will aid future policy formation.

3 Results and Discussion

3.1 Results of the Research

The study's outcomes to encourage the establishment of coffee-based tourism communities are as follows: Puntang coffee is an excellent coffee. District of Pasirmulya coffee farmers know how to cultivate, harvest, prepare, and market quality and proper coffee.

There are several accommodations in the form of a tourist cabin (family accommodation) so that visitors can feel the rural atmosphere of coffee growers that is still original and beautiful.

This subdistrict provides exceptional accommodations near exotic woodlands and Puntang coffee producers' lifestyles to both domestic and foreign visitors. They may encounter a classic natural landscape in the countryside. The village has clean, healthy air; this will ease the monotony of city living. Locals have maintained a trail for hiking. These alternatives give intrepid travellers authentic experiences. Most tourists who engage in tourism-related activities have rewarding life experiences. Most visitor experiences in Pasirmulya were gained via encounters with local coffee farmers. Furthermore, the landscape of the coffee plantations provides many opportunities to make this destination competitive because it has many potential tourism activities, including agroecotourism and adventure tourism, which will offer tourists various experiences and enrich the background.

3.2 Discussion

As the focus of this research, the absence of a considerable number of facilities in this area is crucial to discovering rural tourism-supporting solutions. The amount and diversity of tourist facilities must not exceed the tolerable limits of use. The tourist town must feature a range of tourist destinations to enable visitors to engage in tourism-related activities. The grouping of tourist facilities is divided into three categories: first, the accommodation, which caters to the needs of tourists and enables them to rest, stay, bathe, eat and drink, and enjoy tourist services. The critical support facilities that make guests feel at ease are support facilities. Thirdly, additional tourism amenities are essential complementary services for tourists visiting tourist locations.

An online media website may aid the promotion of the village's distinctiveness and exoticism. Therefore, the municipality or district must often promote village tourism differently. It may construct a tourist-friendly website about the beauty and culture of this city. The internet may be a promotional tool that transcends geography and time. Its website is accessible to travellers from all over the globe; thus, it will encourage them to visit this town.

Individualization of human resources. This empowerment of human resources may be attained by education, training, and participation in seminars, debates, and tourism-related sectors in a precise and direct manner. The area's future development necessitates the expertise of workers who will engage in management activities consistent with its growth potential. For this reason, it is preferable to teach young residents of the hamlet in question to greet and serve visitors. It is offered to tourist authorities in villages, subdistricts, and districts since most peasants only possess agricultural knowledge. They may be educated in different professions to improve the town's commercial operations in the first district. The pattern of association or collaboration between the tourist village manager and the travel or tourism business people of the city or the tourism village coach, in this example, the regional tourism office, may be mutually advantageous. The business sectors may collaborate, including lodging, advertising, and training. The involvement of village officials in the village government's tourism-related activities includes office meetings, exhibits, and ceremonial holidays conducted in the tourist village.

4 Conclusion

This research intends to propose a solution for developing the potential of coffee-based tourist towns and implementing the results in the corridor of coffee-based tourism's potential growth in West Java. This study adds to national and international visitors' relationships with the local population in the city.

In this case, coffee and cultural items are combined to get future support from the local government and other stakeholders. Based on the area's potential, the Pasirmulya subdistrict may serve as a model for a coffee tourist hamlet. Local governments replicate websites' content, including the most recent promotions from all locations in this region. Developing positive relationships with tourism and investment helps expedite tourist communities' growth and development.

The potential of Pasirmulya's tourism settlements is proportional to local government assistance. So that visitors may remain in the region for a more extended period, they must

develop supplementary infrastructure, such as the number of family houses offering to lodge. The Pasirmulya Regency's tourist infrastructure will evolve into a novel model for the coffee tourism town. The expanding involvement of village authorities in tourism includes office meetings, ceremonial displays, vacations, and historical events staged in tourist cities. The Pasirmulya subdistrict demonstrates the potential for producing traditional, natural, and outstanding coffee. Because this study has limitations in a narrow research field, further research in a larger area is advised.

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The Influence of Motivation and Behavior on Sustainable Tourism in Indonesia

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Abstract. Tourism is one of the industries that have an important role for Indonesia, especially in its economic development which has unlimited development potential [1]. Sustainable tourism is believed to be the most suitable concept for the industry in the new normal era which is supposed to make less crowd and interaction [2]. Indonesia is one of the countries experiencing the largest proportional decline in sustainable tourism by 56% [3]. Therefore, this study aims to analyze the influence of the motivation and behavior of domestic tourists on sustainable tourism as an effort to restore the economy of the Indonesian tourism industry after the COVID-19 pandemic. It is not only the responsibility of the government and tourism stakeholders, but also the responsibility of Indonesian citizens as tourism consumers to be able to consciously participate in reviving and maintaining the sustainability of this important industry. This research uses questionnaire as data collection methods and multiple linear regression as main analysis methods. The sample of the research is 122 domestic tourists who have knowledge of sustainable tourism. Furthermore, this research contributes to creating a better sustainable tourism development strategy by understanding and increasing awareness about sustainable tourism not only from the side of tourism supply but also from the demand side.

Keywords: Tourist perception · Sustainable tourism · Tourist motivation · Tourist behavior

1 Introduction

Tourism is one of the industries that have an important role for Indonesia, especially in its economic development which has unlimited development potential. The Ministry of Tourism Performance Report shows an increase in the contribution of foreign exchange from the tourism sector in 2018 which reached IDR 229.5 trillion and increased to IDR 280 trillion in 2019 [4]. However, after the COVID-19 pandemic hit Indonesia, UNWTO stated that there was a significant decline in the number of foreign tourists to Indonesia in 2020 since the pandemic reached 74.84% compared to 2019 [4]. The contribution of the tourism sector to gross domestic product (GDP) and foreign exchange also declined to 4.05% in 2020 from 4.7% in the previous year [5, 6].

Based on the 2021 Tourism Trends Book, the major changes in the tourism industry caused by the COVID-19 pandemic have resulted in a new industrial landscape with four characteristics: hygiene, low-touch, less-crowded, and low-mobility [2]. This statement shows that it is important for the Indonesian tourism industry to be able to further develop Indonesian tourism towards a more sustainable direction in the pandemic era because it is low-touch and less crowd. Although research shows positive attitudes towards sustainable tourism, only a small proportion of tourists act ethically towards the tourist destination [3]. Therefore, those statements show the research problem drives this study to see how ethics of tourists through motivation and behavior influence the sustainable tourism.

This research is used to see whether motivation and behaviour are effective to influence the development of sustainable tourism in Indonesia. The aim of this study will be answered in the following structure of research paper containing of introduction, literature review, research methodology, finding, and conclusion. This research focuses on domestic tourists since domestic tourist can be the first step to revive the Indonesia's tourism industry. The research used indicators based on tourist knowledge model to see tourist perception influence on sustainable tourism development. The result will show whether tourist motivation and behaviour can influence sustainable tourism development, as well as how far the influence would be. Whether it only explores the depth of domestic tourist knowledge, or it can encourage people to support sustainable tourism development. Hopefully, the result will be an insight into marketing development in the tourism industry, as an integrated part of sustainable tourism development.

2 Literature Review

This part will talk about the variables used in this research consists of tourist's motivation, tourist's behaviour, and sustainable tourism. This literature review will be focused on definition and dimensions of each variable.

Tourist's Motivation

Motivation is defined as a force that encourages a person to take an action or not which in essence exists internally and externally, positive, or negative [7]. In the context of tourism, humans will go to places that can meet the needs or desires of humans and make trips which are known as tours. Humans first travel for the sake of sustaining life, then the motivation to travel turns into a motivation to escape from the saturation of the city [8]. Motivation is the starting point of the decision process made by consumers and is an important construct for understanding tourist behavior [8]. Therefore, the motivational variable is the subject of this study where an understanding of the motivational variable is very important for better tourism marketing motivation which is a trigger for tourists to travel can come from push motivation or pull motivation [9]. By understanding the motivation of tourists, the government and tourism destination managers can make better plans to encourage sustainable tourist behavior that supports the development of sustainable tourism by understanding the target market which is tourists.

Tourist's Behaviour

Tourist behavior is the consumption of products and services both daily and not outside the environment of daily life such as in tourist destinations. Understanding consumer behavior is very important for the success of an industry or company [10]. Consumers must be predicted, explained, and controlled based on the understanding of their behavior. In this study, it is stated how the behavior of domestic tourists who travel to Indonesia is reviewed from the stages before to the end of traveling activities in Indonesia. Tourist behavior can be divided into three connected phases, namely before traveling, during traveling, and after traveling [11]. The thought processes, emotions and actions of individual tourists, tour groups and large tourism organizations are always changing, which is why tourist behavior is considered dynamic. In the concept of tourist behavior there are five indicators, namely accommodation choices, travel preferences, problems during travel, intention to return, and behave responsibly [12].

Sustainable Tourism

The growing tourism industry, increasing population, increasing tourism demand, and increasing investment in the tourism industry make negative impacts on the environment, culture, and others increasingly prone to occur. This sustainable tourism development requires encouragement from local communities in implementing it. Instead of referring to tourist destinations, sustainable tourism refers to the environmental, socio-cultural, and economic components of tourism which must be balanced between these three variables to ensure long-term sustainability [8]. This tourism concept focuses on the importance of understanding tourists and the role of local communities in their development [13], as well as analysing the point of view of the tourists themselves. Knowing the behavior of tourists towards sustainable tourism development and the sensitivity of the people visited to the culture, environment and economy are important factors in protecting tourist destinations and reducing negative impacts [3].

3 Research Method

The research was based on a purpose to see if influence of motivation and behaviour is effective on sustainable tourism development (based on tourist's perception). To answer that purpose, then these following hypotheses were proposed:

H1: Tourist motivation has an influence on sustainable tourism in Indonesia.

H2: Tourist behavior has an influence on sustainable tourism in Indonesia.

H3: Tourist motivation and behavior have an influence on sustainable tourism in Indonesia.

The population of this research is domestic tourist who know, understand, and have ever visited sustainable tourism destination. However, the total of the population cannot be defined because the number is undefinable. Therefore, the sample will be counted based on Lemeshow formula [3].

$$n = \frac{Za^2 \times P \times Q}{L^2}$$

Description:

n = Sample needed

Z^a = Standard of distribution with α = 5% = 1,96

P = Prevalence of Outcome, 50% for unknown population

Q = 1 – P

L = level of accuracy, 10% (0.01)

Based on the formula, the sample calculation for this research is:

$$n = \frac{(1.96)^2 \times 0.5 \times 0.5}{(0.1)^2} = 96.04$$

Therefore, based on the calculation, the sample of the research must be at least 96 respondents.

The questionnaire that will be given to the sample of this research consist of several questions about respondent’s basic profile, 7 statements about respondent’s motivation to visit tourist destination, 14 statements about respondent’s behaviour at tourism destination and 15 statements about respondent’s perception on sustainable tourism concept. The valid questionnaire is only the answer from the respondents who understand sustainable tourism concept. The following table shows each part of tourist perception based on motivation and behaviour, operational definition of each variable, and indicators represent the variables (summarized and modified by several research before) [14] (Table 1).

Table 1. Indicator of tourist perceptions

Perception	Operational definition	Indicator
Motivation	The combination of needs and wants that influence tourist decisions in the travel process	<ul style="list-style-type: none"> • Push motivation • Pull Motivation
Behavior	The process of evaluating, acquiring, using, or disposing of products and services, and the physical activities that accompany them	<ul style="list-style-type: none"> • Accommodation options • Travel preferences • Problems during traveling • Intention to visit again • Responsible behavior
Sustainable tourism	Tourism is a concept that has an impact on the environment, society, culture, and economy for both residents and tourists now and in the future	<ul style="list-style-type: none"> • Environment • Society and Culture • Economy • Tourist Satisfaction

Each statement in the questionnaire for respondents will be measured by the Likert scaled. The answer is divided into 5 options, consists of number 1–5 which represent very disagree until very agree opinions. This questionnaire will be spread online by using google form which make the answer easier to be downloaded into an excel file. Some

of the data about the variables of motivation and behavior will be proceeded using t-test with SPSS. The result of the t-test will show the influence of motivation and behaviour on sustainable tourism. To be more specific, the result of t-test shows the value of t-statistic which will be the answer of hypotheses and research questions.

4 Result

The table below shows profiles of the respondents in this research (Table 2).

Table 2. Profile of respondents

Profile of Respondent	Result
Gender	Male 59.2% Female 40.8%
Age	17–25 years 85.4% 26–35 years 13.1% 36–45 years 1.5%
Place of Origin	Java 51.5% Kalimantan 17.7% Sumatera 12.3% Sulawesi 2.3%
Education	Senior High School 20.4% S1 74.6% S2 4.6% S3 0%
Know the concept of sustainable tourism	Yes 96.9%
Understand the concept of sustainable tourism	Yes 93.8%
Have ever visited sustainable tourism destination	Yes 95.4%
Source of information about sustainable tourism	Word of mouth 13.1% Social Media 71.5% Lesson 10% Article, brochure, film, book 5.4%

Explanation of the result.

According to the result, the following table will show the score of each indicator.

Classical assumption test was carried out with SPSS. The normality test used is the one sample komogrov-Smirnov technique, the residual value of the dependent variable and the independent variable with the total of samples (N) of 122 was 0.19. Based on these results, it can be stated that the data in this study are normally distributed because all the residual value variables are more than a significance value of 0.05. Therefore, it can be said that the regression model can be used for hypothesis testing.

Furthermore, based on the results of the SPSS output, it is known that Sig 0.000 < 0.05 then Ho is accepted, meaning that there is a linear relationship between motivational

Table 3. Score for each indicator

Variable	Statement	Total of respondent's answer	Average of respondent's answer
Motivation	Push Motivation	1,697	4.351
	Pull Motivation	2,294	4.41
Total and Average Score for Attention		3,991	4.38
Behaviour	Accommodation Option	1,155	4.4
	Travel Preferences	1,564	4.0
	Problems during traveling	1,141	2.9
	Intention to Visit Again	1,658	4.2
	Responsible Behaviour	1,761	4.5
Total and Average Score for Interest		7,279	5.68
Sustainable Tourism	Environment	1,775	4.5
	Society and Culture	2,871	4.4
	Economy	2,317	4.4
	Tourist Satisfaction	1,774	4.5
Total and Average Score for Desire		8,737	4.45

and behavioral variables towards sustainable tourism. Because the value of Sig 0.000 is much smaller than 0.05, the regression model can be used in this study.

The results of the SPSS also show that there is no symptom of multicollinearity between each independent variable in the regression model when the VIF and tolerance values are tested. The results of the calculation of tolerance on the motivational independent variable of 0.584 and the behavioral variable of 0.584 indicate that there is no independent variable that has a tolerance value of less than 0.1. Therefore, these results indicate that there is no correlation between the independent variables.

Finally, the results of the classical assumption test using SPSS show that the sig value for all independent variables is greater than 0.05. So based on the test results using the scatter plot graph and the glejser test above, it can be concluded that there is no statistically significant independent variable that affects the dependent variable Abs res. So based on these results, it can be concluded that this regression model does not experience heteroscedasticity.

The next step is to analyze the t test score by proceeding with the average score of 11 indicators to get the score of variables. The score will be proceeded by SPSS program with t test analysis to see the influence of motivation and behaviour on sustainable tourism development. The result of the t-test is shown in the following tables (Table 4).

Table 4. Score of each indicator. One sample T test

One-Sample Test						
	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Motivation	8.591	99	.000	1.443	.175	1.443
Behaviour	2.912		.004	.320	.109	.320

Based on the results of the T test in the table above, it shows that the first hypothesis in this study is that motivation (X1) has a positive effect on sustainable tourism (Y). Based on the table of T test results above, it is known that the significant value of motivation is 0.000. Because the value of Sig $0.000 < 0.05$, it can be concluded that **H1 is accepted** (motivation has a significant influence on the sustainable tourism variable).

The second hypothesis in this study is that behavior (X2) has a positive effect on sustainable tourism (Y). Based on the table of T test results above, it is known that the behavioral significance value is 0.004. Because the value of Sig $0.004 < 0.05$, it can be concluded that **H2 is accepted** (behavior has a significant influence on the sustainable tourism variable) (Table 5).

Table 5. One sample F test

Model		Sum of squares	df	Mean square	F	Sig
1	Regression	7,126.674	2	3,563.337	79.411	.000 ^b
	Residual	5,339.785	119	44.972		
	Total	12,466.459	121			

^aDependent Variable: Sustainable Tourism

^bPredictors: (Constant): Behavior, Motivation

Based on the result of the F test contained in the table above, it shows that the third hypothesis in this study is that motivation (X1) and behavior (X2) simultaneously have positive effect on sustainable tourism (Y). Based on the table of F test results, the F value obtained is 97.028 and sig = $0.000 < 0.05$. So, it can be concluded that **H3 is accepted** (motivation and behavior have a significant influence on sustainable tourism variables).

However, from the Table 3, we can analyze the trend for each score of each indicator. For behaviour indicator, both total and average score are the highest. This shows that behaviour has a huge impact on how sustainable tourism can be implemented. Especially on the tourist's responsible behaviour at the tourism destination.

For motivation indicator, both total and average scores are the lowest. Pull motivation has a higher score than push motivation, this shows that sustainable tourism motivation is more dominant from pull motivation.

And for sustainable tourism, both total and average score are still high although it is under to the behaviour variable. From the result, tourist has a good understanding towards sustainable tourism concept.

This study shows an in-line result with previous research about Sustainable Tourism at Kuta Beach Bali in Tourist Perceptions Through Tourist Motivation and Behavior. In which the research also shows that the motivation and behavior of tourists has a major impact in producing sustainable tourism on Kuta Beach, Bali [15].

Another research about Analysis of Tourist Consumer Behavior in the Era of the Covid-19 Pandemic in West Nusa Tenggara” also shown that a good understanding of the influence of tourist motivation variables will make it easier for stakeholders in the tourism industry to identify tourist needs with visiting decisions as a reflection of tourist behavior [4].

Based on this research, sustainable tourism variable has the lowest sub-variable which is socio-cultural sub-variable. The lowest value is found in the statement where sustainable tourism can overcome crowds/overcrowded (15.6%). This shows that the understanding of tourists’ perceptions of sustainable tourism which has a good influence in overcoming the problem of crowds or, in another term, overcrowding in tourism destinations is still lacking.

5 Conclusion, Limitation, and Future Research

According to the result of the research, we can conclude that influence of motivation and behaviour are highly effective on sustainable tourism development. The independent variables of motivation (X1) and behavior (X2) partially and simultaneously have a significant influence on the dependent variable of sustainable tourism (Y). Therefore, government and tourism stakeholders need to consider on becoming more focus on sustainable tourism not only from the tourism destination but also the demand side. To attract visitors with high sustainable behavior to a country or destination, tourism policies should promote sustainable tourism concept as a part of general knowledge. The result of this research hopefully can enrich sustainable tourism development as part of recovering tourism industry in Indonesia post pandemic Covid-19.

For further researchers, it is recommended for other researchers to use a bigger sample size and do the study in a specific destination. This might give more focus and accurate result for a specific characteristic of destination. Therefore, the results obtained in further research can enrich the results and knowledge, then give a better suggestion for a specific place.

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Digitalization for Tourism Resiliency (Case Study: Labuan Bajo)

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Abstract. This study aims to identify the strategic implementation for tourism resiliency in Labuan Bajo, especially during and after pandemic. Resiliency in this study will be focusing on resilience as adaptation and transformation which is regarded as a proactive concept of resilience. Labuan Bajo was popular due to its recognition at national and international level. However, during the pandemic, tourism is undeniable as one of sectors getting the worst impact. In this transition time when the restriction has been loosened, strategy to increase tourism productivity is needed the most. This study uses a qualitative approach with thematic analysis by doing interviews with several main tourism stakeholders in Labuan Bajo. This study found that most of the strategy relates to the concept of digitalization in tourism. Hopefully, this research can give suggestion for tourism stakeholders in Labuan bajo Flores, especially from the supply side, as well as for another destinations in Indonesia.

Keywords: Tourism resiliency · Labuan Bajo · Digitalization

1 Introduction

Tourism has been considered as one of sector that have a good contribution to Indonesia national income. According to the data [1] tourism was on the 5th rank as the highest contributor for Indonesia foreign exchange in 2011 then reached the 4th position in 2012–2015. Moreover, another data [2] shows that the trend was still increasing until the year of 2019, with the total of US\$ 16,9 billion [3]. This huge potential of tourism development can be seen as well from the data of contribution of tourism to the national income, which reached 4,7% in 2019. However, as we know at the end of 2019, the world was hit by a global pandemic of Covid-19, including Indonesia. One of the sectors that got the strongest impact on this situation is tourism.

Based on the data, in 2020, the total of foreign exchange from tourism industry is decreasing to US\$ 3,3 billion with the total contribution on GDP is only 4,05%. This situation was a big hit for tourism industry, especially in air transport and accommodation sectors [4]. Luckily in the beginning of 2022, tourism is starting to revive the industry,

the restriction of movement is being more flexible, hence the tourism activity can be gradually operated. One of the innovations from the government is creating 5 super priority destinations which hopefully will support the growth of tourism in Indonesia, besides Bali. The destination includes Labuan Bajo, which will be the focus of the research. Labuan Bajo has been recognized as one of five super priority destinations in Indonesia [5] and world's seven wonders for its Komodo Island [6]. A well-developed Labuan Bajo hopefully will bring a spread of growth of tourism industry in the eastern part of Indonesia. The data showed that the tourist arrival in Labuan Bajo is decreasing for around 80% from 2019 to 2020 [7].

Therefore, all tourism stakeholders need to apply appropriate strategies to revive the industry. This research is aiming to answer these following questions: how the condition of tourism in Labuan Bajo before, during, and after the pandemic is and what the strategy and innovation implemented for tourism development after covid-19 pandemic in Labuan Bajo in term of increasing the destination resilience. The answer to questions will be following the structure of the paper containing introduction, literature review, research method, findings, and conclusion. Hopefully this research will give a precise strategy to tourism stakeholders in Labuan Bajo, especially from the supply side. Furthermore, this research hopefully can be the insight for another destination by getting the lesson learned from Labuan Bajo.

2 Literature Review

During the Covid-19 outbreak, several industry is seriously affected especially tourism [8]. Travel restrictions; closure of restaurants, accommodations and attractions; national lockdown are real example of the impact to the industry. A bigger impact happened to the international tourist, where based on the data, in May 2020 compared to the same month in 2019, the pandemic had caused 98% decreasing on international tourist arrivals [9] Fortunately, during 2022 the condition is getting better, the restriction is loosened, hence the restoration of the industry must be prepared. One of the concepts to restore the tourism industry is resilience which can be defined as the ability to anticipate, prepare for, respond to, and recover from a disturbance. Hence, resilience in tourism needs to be increased which can be made by diversification, develop new business models, improve sustainability, and digitalization [10]. A theory about resilience classified resilience into 4 different types [11].

- a. Resilience as resistance – holding the line, preparing for the last disaster. This is useful when it prepares people for a hazard but not so useful when the hazard is not as anticipated and has no plan for evacuation.
- b. Resilience as bounce-back – getting back to normal. This is useful in terms of optimistic rhetoric. Not so useful because it can be unrealistic and can lead to the reproduction of vulnerabilities.
- c. Resilience as an adaptation – adjusting to a new normal...accepting that your world has changed which should ensure that vulnerabilities are not reproduced. It can be hard for people to accept living with hazards.

- d. Resilience as transformation - transforming to meet future threats. Radical change (physical, social, psychological, economic) in the face of current or future hazards owned by individuals and communities (of all types).

Based on the author analysis, the proactive concept of resilience is adaptation and transformation, which will be the focus of this research [12].

3 Research Method

This research uses qualitative research approach with constructivist paradigm. To analyze the data, the method used is thematic analysis which include understanding, coding, and creating themes. The data is collected by doing interview to various tourism stakeholder in Labuan Bajo, including government, academician, association, and tour operator. These respondents are chosen based on their knowledge about tourism in Labuan Bajo before and during the pandemic, as well as during this transition time. The participants were deeply interviewed for about 2 h to get information. The data collection was stopped after the research found saturation from the respondents' answers. The interview is based on this following research questions which answer the objective of the research (Table 1).

Table 1. Correlation between research questions and objective of the research

Research questions	Objective of the research
1. How is the condition of tourism in Labuan Bajo before pandemic, during pandemic, and during transition time?	Show the transformation of Labuan Bajo before and during pandemic, and within the transition time
2. What is the strategy of Labuan bajo tourism stakeholder during the pandemic time to keep the industry alive?	Show the implementation of strategy and innovation in the context of resilience as adaptation
3. What needs to be prepared for a stronger resilient of tourism in Labuan Bajo?	Show the transformation happened and needed in Labuan bajo to strengthen the destination's resilience

The result of the interview is transferred into transcript which is manually coded to get the required themes based on 3 research questions. The result of this study hopefully can formulate the strategy to increase destination resilience in Labuan Bajo, as well as best practice for other destination in Indonesia.

4 Findings

4.1 The Period of Tourism Growth in Labuan Bajo

The growth and development of tourism in Labuan Bajo could be seen from several time frame. If related to covid-19 pandemic, it can be divided into before pandemic

which included before 2000 and after 2000; during the pandemic which means during 2020–2021, and during the transition time in 2022.

In the first period, before the year 2000, most people came to Labuan Bajo was international tourist who looked for the dive sites along Komodo Island and the genuine culture of Flores. At that time, Labuan Bajo was still quite isolated because there was only a small airport to reach this place. After 2000, the domestic tourist started to come by the trend of young backpacker tourists. In 2012, Komodo was chosen as new 7 wonders of nature which increased their popularity. Afterwards, Labuan Bajo was assigned to host national and international events, two of the biggest are Sail Komodo in 2013 and Tour de Flores in 2015. Furthermore, the new bigger airport was launched in 2015 which opened a wider accessibility to the island. Although the domestic tourism is growing, based on the data in 2019, tourist coming to Labuan Bajo was still dominated by international, reaching 65% of the total tourist [13].

This data shows different condition in the second period which is during the pandemic. In 2021, the tourist was dominated by domestic tourist, where the international tourist decreased into 5% of the total. This condition happened due to the closure of international border to control the spread of the virus. The effect of this condition surely gave a big hit to the tourism provider in Labuan Bajo. Luckily, during the pandemic, tourism in Labuan Bajo is helped by several event hosted by this city, especially by the government.

The pandemic has not ended yet, however the activity is getting back to the normal condition currently. Therefore, we call this period as transition time, to show the condition where we are trying to adapt with the pandemic. During January to May in 2022, the total of tourists coming to Labuan Bajo has been increased to 200% compared to the total of tourists in 2021. However, it is still dominated by domestic tourist. This condition may be disadvantageous for the government since the income of retribution from international and domestic tourist might be different. On the other side, this can be something beneficial for the souvenir small enterprises, since domestic tourist's intention to buy souvenir is bigger than international one.

‘The income for the city from tourism industry is less than before pandemic because most of the tourists are domestic. The ticket price for domestic tourists is only half the international one. That is why the ticket retribution is decreasing from the last year [...]’.

On the other hand,

‘[...] the souvenir shop in Labuan Bajo is alive because of the domestic tourist. International tourists usually do not think about buying souvenirs, some tourist yes, but compared to the domestic ones, they spend a big amount of money for the souvenir (Table 2).’

4.2 Resilience as Adaptation

Resilience as adaptation is a more proactive concept of resilience. In this kind of resilience, people are able to deal with similar difficult situation, as an expression of adaptation of future hazard [11]. In line with this definition, resilience also seen as the

Table 2. Comparison of tourism trend in Labuan Bajo

Before Pandemic		During pandemic	During the transition time
Before 2000	After 2000		
<ul style="list-style-type: none"> • Dominated by international tourists • Difficult accessibility 	<ul style="list-style-type: none"> • Dominated by international tourists • Airport • International events 	<ul style="list-style-type: none"> • Dominated by domestic tourists • National events • 85% decreasing in number of tourists 	<ul style="list-style-type: none"> • Dominated by domestic tourists • The number of tourists is increasing

capacity for recovery from crisis by following the sequence of rescue, restoration of damaged infrastructure, and then rebuilding the markets [14]. This process implies gradual change as a new business concept may emerge that will differ from the shape and composition that existed in the pre-crisis period [14]. Based on the information collected, herewith several strategies and innovations that can be implemented in Labuan Bajo to revive the industry during the adaptation process.

Networking

Tourism might be seen as a network of interrelated organizations interacting to produce and deliver a service [15]. Networking might be very beneficial to help tourism stakeholders in Labuan Bajo survived during the hard times. Tour operators with networks, especially they who knows another operator from another city, get benefits by getting the transferred tourist who often travel abroad, yet due to closure of international borders, diverted to Labuan Bajo, as said,

‘[...] Several private jets landed in Labuan Bajo (during pandemic), some friends (tour operator) think pandemic did not give big effect, but for some others, it was a big hit, for sure because of the networks’ and

‘[...] tour provider, we have our own way to survive and adapt during this pandemic, especially those travel agents who know how to connect to the network of domestic market, because most of the tourist are domestic at this time...’

Based on the interview, their network is built during their tour activities and good relationship with the guests. Furthermore, to maintain the relationship, social media is one of the platforms that can be used to show their existence in this industry.

Virtual Tours

During the pandemic, when people’s interaction is being limited, the trend of people activity transformed into online. Tourism, as one sector with big effect due to the closure of the attractions, might be changed into virtual tour also. Although the experience must be different, this can be a good alternative to replace the absence of activity during pandemic.

‘[...] I was lucky because I was connected to the virtual tours. So, while all tourism activities were shut down, I could fill it with virtual activities...’, and

‘During the pandemic, I also became virtual tour guides through zoom application. I was doing a live report from the attraction and facilities to show to the audience...’

This relates to the first strategy of networking. The interviewees were connected to the virtual tours provider in Jakarta who gives them the opportunity to be virtual tour guides. This virtual tour might be the alternative for tourism stakeholders to be developed in the condition if direct activity is not possible. For the people who work in the tourism industry, this alternative might be useful as economic income during their off time. However, only a view of tour operator in Labuan Bajo involved in this activity. Therefore, this can be a strategy to be developed at a local level and marketed at a national and international level. Furthermore, when the condition is getting better and people can visit destinations directly, these virtual tours can be used as marketing tools.

Recovery of Tourist Attraction and Accessibility

This part can be both strategy and good impact of pandemic in tourism. Due to the absence of tourism activity, the space is utilized to build a better tourism infrastructure. Batu Cermin, Puncak Waringin, and the waterfront were several examples of infrastructure revitalization initiated by the government and other stakeholders.

Before pandemic, the number of people coming to Labuan Bajo increased to more than 50% from 2018 to 2019 [13]. Hence, during the pandemic time, both tourism authorities and another stakeholder tried to prepare themselves better, to be ready to host more tourists after the pandemic. Besides that, from 2020 to 2021, the infrastructure enhancement was done through road widening and repairing. Due to the pandemic condition, this road enhancement project can be done without disturbing tourism activity.

Besides doing infrastructure enhancement, this strategy needs to strengthen the quality of human resources too. This can be given especially by the government on a local or national level. In Labuan Bajo, during the pandemic, there were various training that was given to the tourism community related to tourism village digitalization.

‘The road development project was started when the pandemic started, started from Puncak Waringin. If the condition was normal, it would be disturbance for tourism, the dust, tourist would feel uncomfortable. The project was fast, as the end of 2021, it was done’.

Digital Payment

During the pandemic, a transformation of payment system in Labuan Bajo from manual into digital payment was built by building QRIS system to support tourist activities. QRIS payment is served in restaurants, souvenir shops, and even small shops in the island. Tourists tend to prefer making cashless payments, especially during the pandemic to avoid the spread of the virus. Moreover, tourists do not have to bring cash because they can do digital payment on the island. However, based on the interview, tourists must make cash payment for entrance tickets to the islands.

‘Here in Labuan Bajo, most shops, even small shops, already use QRIS. Even in Komodo Island, the souvenir shops sell their souvenirs on the table, they also use QRIS for payment. It already exists in this transition time. In the previous time,

we suggest tourist to bring cash money because there will be no ATM, but now they can scan the QRIS to pay what they buy...'

4.3 Resilience as Transformation

Resilience as transformation could be referred to a need to change as a response for disruptive condition [11]. Another author mentioned it as transformative resilience, describing a living system's capacity to transform itself in response to changing conditions and disruptions [16]. In this study, resilience as transformation shows the ability of a tourism destination to find a further solution and to transform into something better which not only could help them in changed situation but also prepare, if in any case, another disruptive situation happened.

Additional Skilled-Tour Guide

Tour operators or tour guides in Labuan Bajo need to enhance their skill to give value added for their capacity. Tour guides with the skill of photography or drone piloting is a new trend in Labuan Bajo as the response to the change of tourist type coming to the city from international to domestic tourist. Previously, this documentation service was not really a matter for international tourist. However, during this transition time where most of the tourist are domestic, this service is on high demand. As a further response, an association of young people focusing on this service was initiated.

"[...] it was their response to that kind of demand. They were consolidated to create a group of local tour guides that can be doubled as photographers. This is initiated to avoid tourists who bring photographers from their own city, so more empowering the locals."

One of the characteristics of domestic tourists is the need for documentation and social media exposure. This is the opportunity that was well captured by the tourism provider in Labuan Bajo as their response to the situation. In this part, the tourism stakeholders need to adapt with the technology change and development.

Product Diversification

Labuan Bajo and Flores in general are very popular with the existence of Komodo Island which internationally recognized. However, there are various attractions that potential to be developed as a destination. Therefore, the stakeholder needs to learn to create product diversification, in order to spread the tourist density and, for sure, the positive effect of tourism. This product diversification can be in the form of thematic trips. This thematic trip could be the response of the market trend changes happened in Labuan Bajo. People tend to come to the destination with the specific interest. This trend could be potentially developed as thematic trip. Several themes that can be developed in Labuan Bajo are traditional culinary, woven trip, coffee trip, and traditional village trip. This thematic trip might be an alternative for tourist coming to Flores although the market would be smaller.

'[...] destination product diversification. Our focus was only on Komodo Island, hence that place is so crowded lately. We might see thematic trips with smaller markets which can be the future trend for tourism in Labuan Bajo' and

'[...] we are trying to accommodate another destination in West Manggarai, especially in the land area. This is what we need to do to push equal development in both areas, the land, and the island.'

Labuan Bajo and Flores in general have a huge potential of traditional village that can be developed as tourism village. From the west to the east, all districts in Flores have potential tourism village. This also helps the local young people who have difficulties finding a job, developing their village, and turning it into economic sources.

Income Diversification

This part relates to the previous one. Over-dependence could be one of the negative economic impacts on tourism [17]. This usually happens in the places where most of the income comes from tourism. However, this might be a problem when disruptive conditions happen to the industry, like a pandemic. Hence, income diversification can be a strategy for those who work in tourism. Good practice can be seen in a village in Flores, named Colol. This place is known as a coffee plantation, where most people are coffee farmers. As they have the potential, besides coffee, they also develop the tourism village with coffee as the main attraction. The people create tourism industry to upgrade their product to increase their income, without leaving their original profession, as coffee farmer.

'[...] another interesting thing from this pandemic is the existence of new tourism villages. This is because many young people, after graduating from university, cannot find a job due to the pandemic. Then they went back to their hometown, utilizing their knowledge and skill, to develop the tourism activity in their village'.

One-Door Online Payment System

Komodo National Park, as a main attraction of Labuan Bajo and Flores, has various attractions which have their own ticketing system. To make it easier and more systematic, the authorities are in the process of initiating a one door online payment system for all attractions within that destination. However, the system is not done yet. This system will make it easier for tourists and tour operators when they want to visit the destination. And it is going to be easier for the authorities to control the number of people at the destination.

Posting and Review Through Social Media

Social media cannot be denied as one of the most effective marketing tools in the tourism industry, both for domestic and international tourists. International tourists tend to do research before coming to a destination, by checking the testimonies of previous tourist experience through social media. In Labuan Bajo, tour operators make their own websites that are connected to Tripadvisor where tourists write their testimonies. On the other hand, domestic tourists also see social media for collecting information about destinations. Based on the interview, for domestic tourists, tour operators in Labuan Bajo make Instagram account to catch a bigger market. Every review or post by tourists in social media can be seen by people worldwide. This makes tourist satisfaction something

crucial to be maintained by tour operators or another tourism stakeholders in Labuan Bajo.

‘[...] tour operators in Labuan Bajo compete to make good portfolio through their websites that connected to Tripadvisor. So, when they organize trips, the client will be asked to make testimonies in Tripadvisor. This testimony is very important for us here. Most international tourists did research in Tripadvisor before they came to Labuan Bajo. They checked the testimony from the previous tourist of a company, if it is good enough, they will make a booking through whatsapp connected to those websites.’

4.4 Re-analysis

The study presents that the strategies identified have correlation to the development of digitalization in tourism. Although the implementation has not been maximized, the destination starts to make a move. Digitalization is defined as the use of digital technology to change a business model and provide revenue and value producing opportunities [18]. Digitalization makes customers of tourism connected, not only to business, but also to another customer. A simple example is through their experience sharing in social media which will influence another customer or tourist. Digitalization also promotes the transformation of service from tourism provider to the tourist, by giving them documentation service or digital payment system. Furthermore, digitalization can be maximized to create more value in the business supply chain to create effective products.

The use of social media as a platform of networking and marketing, virtual tours, and digital payment are examples of strategies that can be maximized of digitalization in tourism. Based on the observation, the attractions near to Labuan Bajo including the islands are equipped with telecommunication provider. Later, when the destination will be readier, digital transformation can be a further strategy to strengthen the destination’s resilience.

5 Conclusion, Limitation of Study, and Further Study

Tourism has contributed to the income on an international, national, local level, as well as to the community. However, tourism is also a fragile sector that will be disturbed in the difficult situation. In this situation, tourism will bounce back, which brings the industry to the normal condition. Therefore, the destinations need to apply strategies that will increase the destination’s resilience, especially to face the difficult situation and to come back stronger. Digitalization is one of the key strategies to increase destination resilience.

This study has limitations which it only sees from the supply side which is the tourism stakeholder in Labuan Bajo. The research will be more comprehensive and applicable if the respondent coming from demand side of tourists as well. Therefore, for further study, the author suggests not only seeing from the supply side but also the demand side of tourism.

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Understanding Indonesian Rural Tourism Destination Marketing Best Practices Using Social Media Applications

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Abstract. We carried out this study to gain a deeper understanding of how to use social media to promote tourism in rural areas in Indonesia. To address this issue, we led the development of information, looking through distribution as books and academic works and books. This study is planned in a subjective involving organization under a phenomenological approach where we look at much information and then survey to find a solution that calls for this review with high validity guidelines. The study included information coordination, in-depth assessment, and information coding, which we attempted to conclude from. The information we do is distributed between 2010 and 2022, considering that the latest stage is the development of various applications and mechanical changes worldwide. After getting the results and conversations, we report that this research focuses on seeking an understanding which we cultivate in subjective reports. The results include tourism promotion and marketing; relying on social media is a compelling strategy. Today, because of the ability of social media can reach consumers, not only locally, nationally, and internationally, therefore, it will be a prospectful when using in tourism marketing option. Hopefully, this result will be helpful for further research in tourism marketing development using social platform.

Keywords: Tourism promotion · Social media · Qualitative rural tourism

1 Introduction

The improvement of data and correspondence innovation applications usefully affects the advancement of the travel industry, remembering the travel industry for provincial regions. The rise of different virtual entertainment and content makers invigorates the inventive business and straightforwardly and in a roundabout way influences the travel industry [1]. Numerous traveler articles or objections have become viral or known to the more extensive local area since they are remembered for the substance via virtual

entertainment. Seeing this reality, presently, web-based entertainment like YouTube, Instagram, Facebook, Tiktok, and others, is a method for diverting side interests as well as a spot to be inventive, carry on with work, advance and show one's presence or construct mental self-portrait. With its modest and open nature, virtual entertainment has developed into an exceptional market or commercial center, considering different gatherings, including unfamiliar explorers [2, 3]. The travel industry advancement connects with correspondence and distribution exercises to assemble a picture of the travel industry. The travel industry items can be proposed to sightseers locally and abroad [4].

Advertising restricted travel industry items with computerized promoting applications, for example, web-based entertainment, is precious. There are numerous ways of utilizing web-based entertainment to advance the local travel industry expected in Indonesia [5]. For the travel industry showcasing to be expanded, the average utilization of web-based entertainment should be possible with an assortment of content, for instance, by involving the most recent patterns for content via virtual entertainment of a place of interest. Utilizing forces to be reckoned with is likewise not unfamiliar; for example, attractions keep the guidelines of the more extensive local area. They are publicizing highlights in Online Entertainment [6, 7].

Local communities, relying on their villages' various potentials and uniqueness, have tried to introduce and market their tourist destinations as one of their favorite [8]. However, the efforts made, both conventionally and utilizing social media, have not significantly impacted promoting Kampung as a tourist destination. The potential and uniqueness of villages and villages with various uniqueness, which are only tens of kilometers from the business center, require the ability to be introduced to the local community [9]. Beautiful and green villages, flower-filled yards and roads, colorfully painted houses, friendly people, and people's handicrafts that have economic value are still not attractive. In a compact society, full of a sense of kinship and togetherness, the tradition of going royong, which is still firmly attached to each village community, cannot be processed into exciting content so that it can pique people's curiosity [10].

Village management as a tourist destination needs attention, especially in optimizing the use of social media as a means of tourism promotion [11]. Local government assistance facilities such as libraries open to the public to increase knowledge and a large enough land for camping ground locations also cannot be optimized as an attraction. Although the village has been planned to become an educational tourism destination, its management, and marketing, including its promotion, depend entirely on the local community's creativity [12]. The village community's sincerity and innovation must be the primary key. Since the travel industry is an excursion starting with one spot then onto the next, which is brief, completed by people or gatherings as work to track down offset and bliss with the climate in friendly, social, and everyday aspects, as well as science [13], as per the Service of Culture and The travel industry Guideline, a vacationer town is a type of solidarity between convenience, attractions, the travel industry supporting offices, and framework, introduced life request locally that mixes with the overarching custom [14].

This WhatsApp application is likewise recognizable, a talk application that residents generally use in Indonesia. For what reason is WhatsApp significant? If the Internet and virtual entertainment present data inactively, it will be understood when individuals

look for it [15]. With this WhatsApp application, we can effectively introduce data by communicating messages to current contacts. So that individuals who read the message will know the data we convey. Likewise, the WhatsApp application can enter specific gatherings, for instance, town deals gatherings and Indonesian visit gatherings; we can pass data in these gatherings agreeing on the standards that apply to the gathering [16].

Based on a review of problems that are backed up by theoretical findings and applications in several contexts of tourist destinations in the region with marketing using social media platforms, this study tried to review several scientific evidences that have been published in various media in the form of books and other scientific publications; thus both authors and readers will gain a deep understanding as well as the ability to design and become tourism drivers as well as individuals who promote tourist destinations in Indonesia. Through the ease and cheapness of technology applications which have now become a means not only for making friends but also a means for doing business, especially tourism promotion both in cities. As well as in rural areas. Reviewing many pieces of literature that have been published will be an exciting means to add insight into the social intelligence of application media for business marketing, especially tourist destinations in the rural areas.

Based on the explanation of the problems and hypotheses above, understanding the best practices for marketing rural tourism destinations in Indonesia with the help of various social media applications in an era full of advanced technology is very interesting and important issues to talk. Next, we designed this study in the structure of the problem exposure, and identify the data search problems described in the methods, and materials section. Next, we described the results of the data analysis in the results section and a discussion that is backed up by various scientific findings from various contexts of tourism marketing applications both at home and abroad, which will sharpen the discussion of the study of understanding the best practice of marketing tourist destinations in rural areas in the country through applications and this social media has become the most phenomenal tool, not only friendship sites but also for various business and government marketing tools.

2 Research Method

In this section of the methods and materials, we describe the stages of implementing this study to review several documents that will answer the question of understanding the best ways to market tourist destinations in areas in Indonesia using social media [17]. To answer this problem, we conducted a series of data searches on publications in the form of books and academic works in scientific journals. This elephant is designed in a qualitative descriptive format under a phenomenological approach where we see and examine many data and then review it to get answers that call with this study with the principle of high validity [18]. The review process involves data integration, in-depth evaluation, and data coding, and we try to conclude.

Search election data help Google search engine with marketing keywords relevant to the problem. The data we do are those published between 2010 and 2022, considering that the latest phase is the emergence of various applications and technological changes worldwide. After getting the discussion results, we report them in a qualitative design

because this study is more focused on seeking understanding in which we process them in a qualitative study. Thus, the stages of implementing this study include understanding the problem, searching for data, and analyzing and reporting the results [19].

3 Result and Discussion

In the result section, we will describe the findings of many publication documents whose purpose is to gain deep resilience in the best practices of marketing Roro area tourist destinations in Indonesia by utilizing social media applications which are phenomenal in marketing business activities. As it is understood, the existence of social media has changed every aspect of life except for business and also the way of human life. This development has also impacted the implementation of business, especially strategies in sales and marketing, such as the world of tourist destinations which are an income sector that does not only happen in big cities but also in the village [20]. This represents what the presence of virtual entertainment means for the travel industry nearby or in the town, which is likewise essential for the pay to break the economy nearby, so we will gather data and report in this segment with the goal that the job of innovation and its commitment to expanding the travel industry progress can be we report.

Social media and the tourism industry advancement

The effect of virtual entertainment on the travel industry should be visible in the manner individuals truly do explore prior to voyaging. Presently individuals are urged to share their movement encounters [21]. Subsequently, web-based entertainment has meaningfully impacted how individuals simply decide. Individuals construct their confidence in the travel industry offices in light of audits from others. Different things have been finished to advance the travel industry, including Television, radio, ads, pamphlets, shows, and, most as of late, virtual entertainment. In addition, social media is also an essential tool for tourism to help understand how consumers make decisions, tourist habits during holidays, and activities after the holidays. There are strategic steps to promote the tourism potential of rural areas in Indonesia by improving access to communications such as the internet, infrastructure, and facilities [22].

So, tourism-driving companies in the region must know that promoting on social media is the most powerful strategy to invite tourists and encourage people to share their experiences of a place's online tourism presence [21]. So, as discussed above, sharing the experience through this social media application will impact the development of honest communication because there is tourism with potential customers and even fellow customers. So to benefit from various social media applications for the advancement of tourism implementation, switching to various social media platforms is a significant proposal for all parties, prospective tourism agents, and tourism movers in the area where they are located [23].

Create Strategies to engage good content

The movement business is outstandingly forceful. When travel industry associations are familiar with the potential benefits of online diversion for their business, they use flows through which they can fabricate their picture care [24]. Associating with content is the

most earnest push toward going; accepting administrators mean attracting extra clients. Since the movement business is connected with visual experience, visual material is the most spellbinding technique for getting through. They should use bright photos and magnificent accounts that are clear and tomfoolery.

Client-created content is one of the marvelous approaches to attracting people to the travel industry. Force to be reckoned with advancing will help make the business perceptible among the others [25]. After deciding the objective region and group, we can contact the movement business rocking rollers and trained professionals. We will not altogether acknowledge how rapidly the picture shows up at allies due to powerhouses. After we learned about the gig of online diversion in the movement of business promoting, we saw that anything we do is a method for being social. To expand the permeability, we ought to effectively reach the clients by paying attention to them or addressing their inquiries. Managers can explore their catchphrases and participate in discussions around the administration. As we expressed above, giving client support online is an excellent approach to making the voice heard. The travel industry is broad and occasional, so it should be applicable concerning timing. Each area has its season, whether well-known or unseen [26].

Best virtual channels for the tourism industry

As in a few different businesses, three broad online diversions-Facebook, Twitter, and Instagram-have been the movement business' heralds. Even though these channels have their group, travel is among the most well-known subjects. Facebook is an excellent stage to get clients on various social occasions [27]. Facebook's Ideas feature enables people to share their experiences. It could be used very well for the ultimate objective of journeying, to show up at information about all clients regarding the development business. Since it complements visual material, Instagram may be one of the best social media channels. It is a remarkable stage for venture-out industry associations to attract current and future clients. Using Instagram will help supervisors attract people, especially twenty to thirty-year-olds, as they structure an extraordinarily powerful assembling on Instagram. Directors ought to follow the development hashtags and make their own to grow the reputation of the posts [28].

While Instagram takes command over the visual material, Twitter is the voice. This stage licenses clients to talk about quick travel tips and advancements. Even though Twitter can be used for photos and accounts of the picture, its real strength is valuable for helping clients. Assuming chiefs want to partake in conversations, they need to have an active Twitter account [29]. Besides the enormous three, there are various stages that supervisors can use to connect with different social events of explorers. For example, LinkedIn is tremendous for B2B. Business explorers share information on LinkedIn bundles about various topics, including trips for work. To show up at business explorers, they use LinkedIn to reach them, depending upon the areas where directors offer help. By and primarily used by age Z, Snapchat is one more critical stage for the movement business exhibiting technique expecting they center around young clients. It is a rapidly creating

virtual diversion channel where chiefs can share what is happening now. Directors can share getting a handle on snaps about the movement business to get thought [30].

Computerized promotion in the tourism industry

A decent item or administration is not sufficient in the travel industry. Tourism organizers want individuals to discuss them and suggest the administration [31]. Web-based entertainment is the ideal stage to work on the web-based standing of the travel industry business. First, they want a computerized showcasing plan for the travel industry. Automatic promotion in the travel industry has forever been a significant component, very much like neighborliness, and is situated in the focal point of the client's travel industry experience. Both little and huge organizations in traveler objections must know about this and make the most of the new open doors that emerge in the area. The travel industry and innovation remain closely connected; we cannot comprehend one without another [32].

It is vital to design at the crossing point between web-based entertainment promotion and the travel industry. Formulating systems, organizing the activities, and connecting each new mission to a substantial objective are critical. Then again, managers are playing blind: Managers can be suitable for specific thoughts and come up short with others, yet they will not have the option to assess why and gain from work. The computerized showcasing plan for the travel industry can be the key that opens the way to many new clients if they know how to make it happen [33].

Tourism reopens after Covid-19 using social networking

Starting around 2020, the episode of Covid-19 has rocked the boat around the town economy hard and changed various endeavors. Most countries have negligible import and item trade for fighting the eruption [34]. Various endeavors in China have experienced a somewhat long suspension of work and creation, and the public power thoroughly controlled staff's cross-line and ordinary turn of events. These systems had influenced the movement of business, which has perpetually been more dependent upon the real economy, into a state of stagnation. The UN World, The movement business Affiliation, made a declaration saying that the overall travel industry lost \$320 billion in pay from January to May 2020 alone given the clever Coronavirus plague, on various occasions, the aggregate lost during the overall financial crisis in 2009, compromising the livelihoods of millions of people [35]. WHO recommended that different countries limit people's development, shut down getaway destinations, and suspend economic activities/public events during the Covid epidemic? Pandemic or prosperity-related difficulties, similar to the sensation of fear toward Covid-19 and saw risk, have put protests/metropolitan networks under lockdown in different countries [36].

The review examines all current web-based entertainment-related research articles distributed in scholastic distributions between 2007 and 2011, emphasizing the travel industry and cordiality. Given a substance examination of the dissected articles according to the viewpoints of the two clients and providers, 281 as per the discoveries of the article, purchaser-driven examinations, for the most part, centered around the utilization and impact of web-based entertainment in the exploration period of voyagers' get-away arranging process [37]. Supplier-related research has revolved around headway, the chiefs, and assessment abilities, with few examinations keeping an eye on

assignment. The revelations of the concentrate show the fundamental worth of online diversion for the movement of business power. The fixation, in like manner, helps the academic world and industry by perceiving research openings in existing investigations and offering an assessment plan for what is to come. Plus, the movement business is currently being affected by the Covid pandemic, and the survey looks at the massive changes in the movement business progression and displays [36].

4 Conclusion

We have led a progression of information studies to respond to the subject of this study which looks for logical proof that expresses how to help virtual entertainment advance the travel industry in country regions in a period of high innovation perpetually. Concerning what we have gathered, among others, the utilization of virtual entertainment to develop further the town, the travel industry is for sure one of the leaps forwards made by the travel industry movers following government strategies in Indonesia, where all areas connected with improvement should use innovation or online entertainment. Similarly, we tracked down that advertising through virtual entertainment to advance the travel industry should be possible by censuring different procedures which make invigorating substances to draw in additional guests to vacationer regions. Then, we additionally found that the travel industry does many accepted procedures. Making web destinations and interfacing them with virtual entertainment is one of the endeavors to advance the travel industry that many people have completed. In the following country, we also found the problems faced when reopening the tourist area after the Covid disaster. Implication, because social media is an essential tool for the advancement of tourism, so to help potential visitors understand how consumers make decisions and what tourists do during holidays. Activities after the holidays, one of the most relevant and trendy tools is to advertise them on various social media. Tourism enthusiasts will be familiar with social media in the fast development of the digital world. Social media is used for various things, including tourism promotion. Therefore, it can be seen how the potential can be obtained from promotions on social media. The more people who access social media, the more excellent the opportunity to promote a product or service to attract the attention of its users. Business people have long used the use of social media for promotion.

Limitation of findings.

Apart from the advantages and disadvantages of this study, which relies on online social media-based marketing to promote rural tourism destinations in Indonesia, we summarize some advantages and disadvantages. After reviewing several advantages, it turns out that we also found weaknesses, including that digital-based marketing, mainly social media for tourism promotion; we found that consumers certainly had to be extra careful even if they only saw the information, especially when they had to transact. The disadvantages include that the intended target is sometimes not so accurate that it can disappoint potential tourists who come to the area. Tourists still have to use various facilities, including asking for more accurate information to be sent; even when they are at their location, they must also pay more fees, considering that the promotion costs money.

Where tourist destination advertisers must be active and update all updates related to tourism promotion activities which will, of course, have a timeline that continues to run fast so that often content sent becomes spam, they must actively promote and update tools for digital problems, there is indeed a change where digital marketing social media-based is indeed very easy and fast, but its weakness is also often detrimental to prospective tourists. Considering that our study relies on various data and results of scientific publications here, accuracy and sharpness of the author's understanding are needed to be able to minimize which sites are tourism and other marketing activities that require strong hit-tech to be able to carry out promotions and marketing so that this becomes a best practice in promotion and marketing activities for rural tourism in Indonesia.

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Family Homestead as an Innovative Project for the Development of Tourism, Entrepreneurship and Management of Socio-Economic Systems

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Abstract. The modern development of socio-economic systems indicates a shift of interest on the part of society in the direction of stable forms, multifunctional multi-vector structures. This is due to the growing level of consciousness and ecological awareness regarding the anthropogenic impact and the degree of responsibility of individuals during the last decades. The direction of sustainable multidisciplinary development becomes a priority from the point of view of social orientation along with the politics of human centrism and nature centrism. This will contribute to ensuring a high level of the quality of life of the population, restoring health, and solving housing, demographic and environmental problems. The directions specified simultaneously contribute to the restoration of natural, cultural, entrepreneurial and tourist potential, protection of natural resources, and reduction of the level of overexploitation of territories. This can be achieved through the introduction into the legislative field of the concept of lifelong use of a plot of land for the arrangement of a family homestead (FH), without the right to sell it and with the right to transfer this plot to inheritance. The plots of land allocated for the arrangement of «FH» and the products grown on them should not be taxed. Depending on the relief of the area and the requirements of the relevant state authorities, from 30 to 50% of the plot should be planted with non-fruit trees. Legislatively approve the tentative charter of an ecological settlement, which can be used by a voluntary community of citizens of Ukraine on free, uninhabited and undeveloped land in rural areas in order to comply with the requirements of ecology, land protection, and general human values in public life.

Keywords: Family homestead · Family homestead settlements · Multifunctional development · Rural development · Sustainable development

1 Introduction

The need to rethink the way of life of people from the standpoint of forming the foundations of their sustainable development, activation of employment and, in particular, self-employment, social security, found its manifestation in the activities of social structures and institutions. This manifested itself in the creation of new power relations, including in relation to the activities and functioning of households, non-governmental organizations and the practice of regulating relations in society by the government. Taking into account the indicated trends, it is advisable to focus on knowledge management in the formation of an effective business model, including in rural areas (Bratianu et al. 2021; Prafitri et al. 2018). Conceptual approaches to the development of society, the national economy, and global growth can be found in the works of both domestic and foreign scientists. In particular, the following stages are considered: urbanization, suburbanization, counter-urbanization, reurbanization, and the level of socio-economic activity of society and the dynamics of migration processes are cited as the criteria of manifestation (Farkas 2017; Meulen 2013). Business management is always accompanied by the consideration of financial aspects and the use of innovative tools, including strategic planning, outsourcing, benchmarking, management of business processes based on the leadership of an entrepreneur, budget and supply chains, a balanced system of indicators (Valinkevych and Orlova 2019, p. 128; Usman et al. 2020; Mc Loughlin et al. 2021). In addition, it is important to consider and be able to substantiate the impact of risks on business and manage them, in particular through the creation of an appropriate level of organizational culture (Visser and Scheers 2018; Makkawi H. 2021; Klucka and Grunbichler 2020; Polinkevych et al. 2021) focus on flexible management and the social component of business processes (Vugec et al. 2018; Aysolmaz et al. 2018). The management of sustainable development of territories should be based on the cooperation of local self-government bodies with business (Yakobchuk et al. 2021; Ovdyyuk et al. 2021) and be focused on greening. One of the types of environmentally oriented business that contributes to the development of territories and people's health is bicycle tourism (Gazzola et al. 2018; Costa and Lima 2018). Researchers have proven that business efficiency and labor productivity increase in family businesses and depend on integrated quality and human resource management (Azizi et al. 2019). It has been proven that the management of sustainable development of territories should be based on the digitalization of business processes (Stjepic et al. 2020). However, taking into account the high level of urbanization, management aspects of ensuring the sustainable development of territories with an emphasis on the development of business and tourism require detailed research.

Therefore, the purpose of the research is to develop and deepen the theoretical and methodological foundations and applied provisions of multifunctional development of socio-economic systems, in particular in the field of tourism, entrepreneurship and management. Achieving the goal involves setting the following tasks: to identify the levels and institutional principles of regulation of the multifunctional development of rural areas, to reveal the organizational and economic mechanism of regulation of the development of rural areas through the implementation of the «Family Homestead» project.

2 Materials and Methods

Within the framework of this article, there was a need to define the term «Family Homestead» as a modern phenomenon, which itself arose only recently, as well as in the scientific literature. The existence of various definitions related to the multifunctional development of territorial communities imposes the need to identify a sublimated approach in which the advantages and disadvantages of groups of definitions are considered. Approaches to sustainable development as an element of a multifunctional approach on the European and American continents differ greatly. Both cases refer to the type of sustainable development or a modern and niche type of socio-economic management of territories, and since the territory of Ukraine is considered, we are firmly convinced that the more acceptable model is the one adopted in Europe or the European network of the Global Network of Eco-Settlements. The criteria for European sustainable communities are specific and require compliance with certain rules.

From the above, it can be concluded that there is also a need to determine whether the idea of «Family Homestead» meets the preliminary conditions for possible declaration as a sustainable community and the possibility of ensuring multifunctional development on its territory, as well as in the immediate environment, in particular in cooperation with other family homesteads in family homestead settlements format. Therefore, monitoring, inventory and evaluation by scientists, specialists of state administration and local self-government bodies, public organizations and other public institutions is required as a special phenomenon that the studied territory possesses. It is also necessary to systematically evaluate other resources of natural and anthropogenic origin in their relationship and interaction as systemic factors of multifunctional development at the global level. It is important to take into account the opinions and attitudes of residents, tourists (domestic and foreign) who visit settlements where family homesteads and family homestead settlements are located. Studies related to the perceptions of all stakeholders about the natural and anthropogenic values of the territorial community, which are especially important due to the presence of significant differences and the need for cooperation of all participants in social relations in order to obtain a synergistic effect from the use of available resources, as were carried out within the framework of the Strategy for the Development of the Territorial Community from 2013 to 2021. These studies were carried out by Plotnikova Mariia Fedorivna in cooperation with the All-Ukrainian public organization «People's Movement for the Protection of the Earth», state and local self-government bodies, public organizations (NGO «Granidub», NGO «Lagul Association of Sustainable Land Use»), especially related to the data collection and data processing. The questionnaire poll covered a population of 2,070 people in all regions of Ukraine, the focus group of respondents was located in the southern, central and northern regions, in particular Zhytomyr, Kyiv, Kharkiv, Odesa, Kirovohrad, as well as 380 respondents (residents, tourists, representatives of state authorities and local self-government) in the format of unstructured interviews. In the interests of this study, only those issues are considered that, in our opinion, are relevant to the considered problem of multifunctional development of territorial communities.

The theoretical and methodological basis of the study is the classical theories of multifunctional noosphere development. These include issues of exogenous economic growth and innovative practices in public administration. This also includes issues of

organizing socio-economic processes of territorial communities. As a source of information, the materials of the Google Scholar, Web of Science, Scopus databases, official data of the State Statistics Committee of Ukraine, and state institutions are indicated. This study is based on the study of the experience of territorial communities of Ukraine. They are implementing the methodology of development of territorial communities within the framework of a program experiment supported by the Zhytomyr Regional State Administration (communities implementing the idea of the «Family Homestead» received experimental status), the Ministry of Agrarian Policy and Food of Ukraine (Zhytomyr Region is recognized as a pilot). The assessment was carried out using the software and hardware complex Omega-M (manufactured by Dinamika Technologies), SPSS Statistica. This assessment was carried out using economic and mathematical analysis, economic and mathematical modeling of social processes and forecasting their development. With the help of sociometric and general scientific research methods, the state of socio-economic development of rural areas was evaluated, and the reasons for their decline were identified. Observation as a basic approach to collecting information allows us to assess the effectiveness of the methodological approach and the consequences of its application for the success and health of students. Based on the received data, an academic report on the implementation of the practice of balanced personality development was created. Socio-economic processes were analyzed by experts in the field of public administration, local self-government, management of social and economic development. The analysis was carried out from the point of view of features of planning, organization, management, control and accounting. An analysis of Internet sources, literature and documents was carried out, methods of analogy and statistical data analysis were applied.

3 Results and Discussion

The long existence of cities has caused communal collapses, contamination of air, water and soil pollution, problems of transport, water, energy, administrative and other livelihoods, problems of waste disposal, massive construction (lack of spatial basis for growth and development). The consequence of the growth of agglomerations is the opposition of the place of work of the family to the place of residence (concentration of efforts, attention, time and other resources of the individual at the place of work not for the benefit of the family). A separate form of such confrontation is labor migration, when an employee leaves his family temporarily or for a long time, and replaces his own house with an apartment, official housing or barracks). Instead, the reverse processes of migration are due to the formed system of values associated with thoughts about the future, care for the environment, and a high level of household services. Economic reasons are crucial for low-income people when economic security is important. For people with an average and high income, it is crucial to improve the quality of life, the safety of the natural environment and children (Plotnikova et al. 2022).

The reasons for resettlement are free and forced choices. When making a free choice, they focus on opportunities (financial, remote employment, flexible work schedule, represented more often by freelancers, the wealthy population, pensioners, etc.) and beliefs (not perceiving the rhythm of the city, the conglomerate of traffic jams, smog, crime,

stress, psychological pressure, etc. associated values, fatigue, life, communal monopoly, diseases, «stone and concrete jungle», «rat run», deterioration of health, internal exhaustion, uncertainty in the future). A forced choice occurs in the case of refugees, the need to care for sick relatives or parents in old age, financial or other inability to live in the city, the desire for better living conditions, the worldview striving for harmony with oneself and Nature, understanding the integrity and interconnection of all processes in the universe (Plotnikova 2020). Migration to rural settlements is due to the desire for ecological living conditions, a healthy lifestyle, the formation of the foundations of food security, and the development of an original culture (Plotnikova et al. 2022). The growing popularity of ecological practices in all regions of the world aims to restore the natural environment, reduce the anthropogenic load on it and indicates the global nature of the processes, the urgency of changing the technocratic, market approach to life for modern society, along with the popularization of the 5E and 5R approaches. The 5E approach includes Elementary Food, Eco-friendly Business, EcoLife, eco-efficiency, eco-construction. Elementary Food - includes healthy food (Local Food, Wellness), vegetarian dishes, «slow food» (Slow Food) as a counterweight to Fast Food. Eco-friendly Business is environmentalization of business, social entrepreneurship. EcoLife – involves the development of permaculture, eco-farms, production of organic products, certification, restoration of perennial unfruitful plantations as a mechanism for increasing soil fertility, improving the water, air, and mineral-biological balance of the territory, multiplying flora and fauna on the territory. Zero-waste lifestyle offers the following 5R principles of lifestyle: refuse – rejection of unnecessary; reduce – reduction of what is not consumed; reuse – reuse of what is possible; recycle – recycling; rot – composting), (Ovdiyuk et al. 2022). The trend towards the organization of «smart» space: smart-community, smart-technologies, smart-houses, smart-cities, etc. outlined the desire of a modern individual to develop and spatially organize an environment as friendly as possible to people, where the main issues are people and ecology, as well as technologies, which allow them to be harmonized (first of all, rational use of resources and improvement of anthropogenic impact on the natural environment, in particular, through waste-free living, use of renewable energy sources, rational resource use, cost reduction).

The characteristic features of the future civilization revealed in the writings of Volodymyr Vernadskyi and based on the laws of Progress and Regression allowed us to draw a conclusion about their activity: 1) the modern life activity of the Biosphere is based on parasitism of food chains, where the strong eats the weak, which is also reflected in society; 2) management of the Biosphere is laid down at the level of instincts in every type of living organism and is implemented through the gene pool, so the animal cannot go beyond its instincts; 3) human activity has free will and is based on Consciousness, not only on natural instincts, and develops due to collective communication, a sense of compassion (shared experience), intellectual cohesion, ethnic rituals, national statehood, ecological culture; 4) in interaction with the environment, a person creates an artificial living environment (noosphere: housing, settlements, cities, states, industries, science, culture); 5) from the point of view of food chains, man is a consumer and parasitism has become entrenched in his knowledge, which caused the parasitic development of civilization (slavery, slave-owning, feudal-serf, capitalist systems, social totalitarianism,

freemasonry, mafia and oligarchy within the limits of a democratic system, war, striving for power and world domination, nuclear weapons, etc.); 6) management of the noosphere is based on ancestral gene pools that accumulate intellectual and spiritual information of each kind, create Social and National Consciousness with the participation of state power (as opposed to modern psychotropic bombing, psychotropic change of consciousness, robot-controlled chips, mutants and cyborgs to control people through fear and unconscious); 7) modern civilization has reached the point of bifurcation of the Universal Law of Progress and Regression, therefore, a promising direction to ensure the development of humanity is the transition to the stage of Wisdom through the Ecological Culture of man in the noosphere; 8) in addition to the material noosphere, there is a virtual noosphere (thought, language, EGO, creativity, consciousness, subconsciousness, mind), which are able to allow a person to become autotrophic, to go through the stages of cognition, awareness and enlightenment and to reach the stage of Wisdom, which will enable change due to ecological culture consciousness from the consumer to the noosphere (Fig. 1), which, in turn, are revealed from the position of the following levels of perception: 1) the level of egocentric limitation; 2) level of family values; 3) level of national values; 4) the level of universal values; 5) the level of spiritual (cosmic) awareness. Overcoming existing barriers is currently taking place on the basis of the formation of a unified worldview through a system of new knowledge, information work, and creativity. Integration is most often ensured at the level and with the help of physicochemical processes, energy interaction, information synchronization (delivering information, through information processing systems and process management), understanding one's own structural and functional purpose, through gestalt (when the holographic format of thought creates further prerequisites for development), spirit.

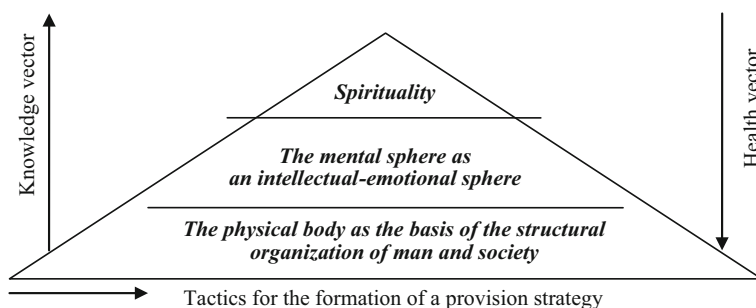


Fig. 1. Noosphere approaches to cognition and healing Source: own research.

The world experience of differentiation of settlements can be summarized according to the following characteristics: 1) according to the purposes of creation – religious, spiritual, communes and communities, ecological, anarchic; 2) by type of criticism of society – psychological, political-economic, religious (Levkovskaya et al. 2022); 3) according to the activity of public influences on society – local, regional, global; 4) by location - urban, rural, mixed; 5) according to the motivation of creation - anarchic, essential (formation of the appropriate level of consciousness), according to interests

(likes to do the appropriate work); 6) according to the settlement council system: one-level (equality of all participants), pyramidal (everyone manages within the limits of their powers and functions of a certain level of the hierarchy); 7) by the number of participants – family (members of the same family are present), public (traditionally or spontaneously formed administrative and legal units – people settle in villages, garden plots, build cottages outside the city to breathe fresh air), settlements of family homesteads (as territories uniting several clans, each of which forms a space where it collects traditions, spirituality and the heritage of its clan); 8) by areas of activity - settlements created for the purpose of protecting forests, water, greening of the urban lifestyle, movements to ensure a healthy way of life, for living together in shared houses in cities, etc. With the goal of preventing violence against both people and the surrounding space, they have signs of sustainable development, balanced use of natural resources (man's existence in harmony with nature, because man is only a part of it). The priority for such communities is to preserve the environment for future generations, including by reducing consumption, cyclical use of resources, restoring the potential of the territory, spreading the practice of organic farming, waste-free living, using renewable energy sources, improving relations between individuals in society through increasing quality of life, spiritual development, social justice and support, formation of sustainable self-sufficient communities.

Implementation of the «Family Homestead» project and, based on it, the draft Law of Ukraine «On Family Homesteads and Family Homestead Settlements in Ukraine», developed by the All-Ukrainian public organization «People's Movement for the Protection of the Earth» (chairman Mykhailo Vasyliiev) together with the National Research Center «Institute of Agrarian Economics» (Kyiv) provides for the legal establishment of the right to 1 hectare of land for every Ukrainian family that wishes to build its own family estate. The adoption and implementation of the items of the draft law will ensure the development of the family on a qualitatively new level of moral and psychological basis and will have not only a tactical, but also a strategic positive effect. The definition of persons or their groups that implement each of the mentioned functions within the community (or outside its borders, in particular, this can be administration by state authorities or such is the issue of national security, which is decided at the national level, etc.) is decisive not only from the point of view of the efficiency of their implementation, but also of the community's ability to independently initiate and implement the plan. More successful in this regard is the experience of Ukraine, where an ecologically conscious attitude to the surrounding space is combined with ancestral values, spirituality and culture of the Ukrainian people, which are being revived in ancestral settlements (Table 1). The flow of energy produced by the family homestead settlements of Ukraine is carried out in accordance with the development of dynamic systems and can be calculated according to the formula:

$$E_P = \int \left[\left(W\varepsilon + \frac{1}{2} - \rho - H \right) n_1 - \sigma_H \frac{dy}{dx} \right] dx. \quad (1)$$

Mainly, it is possible to assume the presence of non-linear changes, conditions and structure of participants in social relations, capable of concentrating energy from space in the format of an egregor (Yakobchuk et al. 2021), which provokes the appearance of an

energy flow of a torsion field, the magnitude of which is proportional to the investment of energy according to the formula:

$$E = e_i \ln \frac{e_0}{e_1}, \quad (2)$$

where e_i is the initial investment in the development of the family homestead (dynamics of all forms of investment in terms of energy units); e_0 – is the initial number of family homesteads, e_1 – is their final number in the community. Thus, the final energy assessment of a settlement built according to the principle of «Family Homestead» is determined as a function of the overall assessment of all types of investments in its development: the product of the number of investments and the ratio of the initial number of family estates to their final number. The presented function illustrates the existence of an optimal rate of investment and development of investments for a specific territorial community, and the rate of growth of households changes at a slow rate compared to the number of investments due to the limited rate of change in the population's consciousness. It follows from the formula that the further development of the community is related to the removal of unnecessary elements, such as garbage, inability to communicate, cooperation, etc. (the community should act as a single organism, activating its internal potential). At the same time, it should be noted that the rate of change of the logarithm value will be low. However, from generation to generation, this change will be more and more noticeable, and the consequences will be more and more significant compared to the initial situation, because it will not be necessary to waste efforts on problems that have already been solved.

Cheap and easy-to-use technologies are a promising vector of living according to the principle of reasonable sufficiency, when production and consumption are at a minimum level, which ensures constant spiritual growth (Vasiliev and Plotnikova 2013). The focus on socialization, public management of community development, responsibility for one's own life and surrounding space forms qualitatively new standards. At the same time, contact with the natural environment, in particular, the forest, plays an important role. Being a powerful producer of resources (wood, mushrooms, berries, etc., which can be consumed, processed and sold, including as a product of the functioning of crafts and industries, as well as the ability to improve health and recreation and education), the forest forms a spatial environment richer in linkages and values (a garden planted in it is more resistant to pests and diseases, due to the creation of a microclimate it can contain more heat-loving species of flora and fauna, protect and inspire a person to new achievements, increase the speed of his thoughts).

Rethinking human behavior takes place on the basis of understanding peculiarities, promotion of values and social advantages, and also as a result of ensuring their preservation and multiplication. On the other hand, the mechanism and motivational factor for promoting ecological and social understanding, respect and preservation is the level of consciousness, responsibility for oneself and the surrounding space. In other words, management of sustainable development, information activities (in particular, implementation of educational materials, information panels or seminars, promotion of high-quality local brands, local business activities), awareness of local advantages and, on this basis, the formation of satisfaction, become the key principles, the fundamental basis of the strategic management of the territory needs. In this way, the experience of

Table 1. Comparative characteristics of the most common socio-economic systems

Type of settlements	Resources and capital association	Recruitment practices	Introduced technologies
Business structure	Association for the purpose of capitalization of resources and income	Labor resources are accumulated as a part of production capital on terms of hiring and payment	Industrial production technologies prevail
Traditional settlement	Association by historical practice and territorial feature	Predominance of family and clan relations in matters of solving development tasks with the possibility of employment	Predominance of practices of traditional technologies of production and life activities with little involvement of best practices
Ecological settlement	Involvement of subjects based on a common worldview and value system is practiced	The practice of solving development tasks by the forces of a community not united by family and clan relations	The practice of both rejecting modern technologies (downshifting) and their involvement (upshifting)
Family Homestead Settlement	Involvement is practiced, in particular, through public administration and the activities of public organizations	The practice of family relations in issues of solving development tasks	The practice of nature-rational (nature-appropriate) technologies that ensure the harmony of human-nature relations

Source: own research

common interests is created, including through education, and from the standpoint of practice, the process of community management is implemented, which involves the creation of new business entities and jobs for the local population, which, in turn, leads to various economic benefits from protection and management measures. The initially determined assumptions of the model of the formation of sustainable systems as a component of their socio-economic innovative development are as follows: it should be a defined territory that develops the local economy and realizes its own heritage, including ecological and cultural, through the interaction of all participants in the territory. The synergistic effect of such integration is multidimensional, including as a result of obtaining economic, socio-cultural and environmental benefits due to sustainable development; creation of new enterprises and jobs; raising awareness of local biodiversity and geodiversity, their preservation for both tourists and the local population; involvement of scientists and researchers who will contribute to increasing the level of protection of values, preservation of the environment as a whole; cooperation between different stakeholders; creating a recognizable brand, etc. The main factors that determine the

socio-economic development of systems include the following: natural resource potential, infrastructural support, human and technical-technological (including innovative) capital. Based on the above, the original research model of the formation of sustainable socio-economic innovation systems can be presented as follows:

$$P_r = a_0 + a_1P_1 + a_2P_2 + a_3P_3 + rv, \quad (3)$$

where P_1, P_2, P_3 - are common variables; a_1, a_2, a_3 - are coefficients that reflect the strength and direction of relationships between common variables; a_0 - is a free member; rv - is a random deviation. Determination of the effectiveness and stability of the directions of socio-economic development of the system was carried out in accordance with the principles and conditions of optimization modeling, which reflects socio-economic development and criteria for its change with general indicators. According to the optimization modeling algorithm, the following formula can be applied:

$$\begin{cases} PY_s = G_{0s} + G_{1s}P_r + rv_s \\ PY_c = G_{0c} + G_{1c}P_r + rv_c, \\ PY_e = G_{0e} + G_{1e}P_r + rv_e \end{cases} \quad (4)$$

where PY_s, PY_c, PY_e - are explicit variables; $G_{1s}P_r, G_{1c}P_r, G_{1e}P_r$ - are potential components; G_{0s}, G_{0c}, G_{0e} - are free terms; rv_s, rv_c, rv_e - is random deviation. The optimization model was formed on the basis of statistical reporting (Table 2).

Table 2. Internal consistency of the elements of the socio-economic system

Factors of socio-economic development	Criterion			
	Cronbach's, α_c	Dillon and Goldstein's, $\rho DGol$	Eigenvalue, G_1	Eigenvalue, G_2
Natural resource potential	0,89	0,95	4,16	0,76
Infrastructural support	0,83	0,91	1,82	0,28
Human capital	0,71	0,90	1,87	0,29
Technical and technological capital	0,81	0,92	2,62	0,44
Innovative capital	0,78	0,91	2,10	0,34

Source: own research by (State 2022)

A sustainable socio-economic system is fully provided by specialists with all the necessary professions and the formation of society. Local authorities determine within their borders the territories on which it is necessary and possible to locate settlements (where they do not already exist). In addition, in rural settlements, in the presence of

desolate land plots, local authorities can apply the regulatory framework provided for PC. Local authorities determine the necessity, significance and social need for such measures (Vasiliev and Plotnikova 2014). Regulatory state policy provides for approaches to financing projects based on the principles of partnership between the state, business structures and the population. The implementation of this approach should provide for the availability and popularization of services in the field of tourism, entrepreneurship, management, education, health care, culture and sports, social security, etc. An effective system of local self-government based on the principles of direct people's rule and strengthening the role of the territorial community, including through the implementation of the «Family Homestead» project, should become a mechanism for optimizing the interaction between society and the state. The latter involves the stimulation of local initiatives to build human and social potential, the formation of civil society structures based on the close interaction of social, ecological and economic spheres of society's life (Table 3).

The growing interest in deurbanization is due to a number of interrelated factors, including the inability to ignore the social, economic and environmental problems associated with cities, which can only be effectively addressed through local policies and programs, as well as the presence of political and financial benefits from decentralization of the provision of services to local authorities and institutions, which took place in Ukraine. The policy of decentralization is increasingly bringing the issue of urbanization to the level of local authorities as regulators of the financing of local services and with the aim of intensifying their role in managing local development. There is also a need to expand research in the field of the interdisciplinary relationship between infrastructure and service provision, solvency, relative competitiveness and economic indicators of the development of territories, business and tourism as one of the more dynamic and, at the same time, less budgetary spheres of economic recovery through the management and mobilization of local resources on against the background of the aggravation of meeting the needs of the territories in the field of health care, sanitation, water supply, housing and transport, which require large capital investments. Their solution is possible under the condition of the formation of sustainable and capable smart-communities capable of providing the necessary infrastructure and services in a decentralized environment, which is more effective in terms of public management, inclusion and participation in regional development. The importance of private investment in strategic planning, institutional development and capacity building, as well as in the development of management and financial systems cannot be overstated. This includes city governments partnering with community groups and leveraging the capital and resources of the private and international sectors to deliver the services that more and more communities expect. More attention is also required to the issues of environmental protection and social development.

When proposing the proper practice of sustainable development, it is necessary to take into account economic, ecological and social aspects, in particular in matters of taking into account regional differences and, in some cases, the impossibility of simply transferring advanced world or domestic experience without its adaptation or modification to local conditions. Thus, urbanization creates problems for the development of rural areas due to the loss of productive agricultural land due to the development of suburbs,

Table 3. Approaches to the formation of a socially and economically sustainable structure

Feature	Enterprise	Local community
Result: fast and expensive	Employment (recruitment) of professionals Advantages: fast results Disadvantages: high cost of involvement, low level of adaptation due to the implementation of purchased templates	Selection of the most active participants and the most attractive conditions for starting the project Advantages: the activity is carried out by those who are most eager to do it Disadvantages: as a rule, there are few active participants, their resources are limited, the result is at the disposal of all or there is a need to introduce restrictions, in case of disappearance, the asset ceases to exist
Result: long and purposeful (with maximum adaptation to the goals of the object)	Enabling young professionals Advantages: lower cost of engagement compared to professionals, setting tasks relevant for the company, creating a team, higher level of commitment to work Disadvantages: long training period, need for qualified mentors	Involvement of the entire community or a significant part of it, individuals of youth, formation of their worldview in the direction of improving the value system Advantages: the system becomes stable, self-sufficient in the long term, the goals and the result of their achievement satisfy the participants, the experience can be spread Disadvantages: inertia of thinking, long adaptation to new conditions

Source: own research

which is clearly visible from the experience of the Kyiv region agglomeration. Urbanization increases the need for structural reforms in agriculture. The advantages offered by large cities in terms of opportunities for higher education, health care, employment and higher wages make it difficult to live in rural areas, forcing them to compete and attract qualified specialists to support the development of the trend of the decline of rural areas, which is accompanied by the appearance and growth of new settlements in the countryside at the expense of immigrants from the cities. Their development is associated with a change in consciousness. Reviving settlements in the countryside, the settlers build housing, roads, schools, houses of culture and creativity, medical, health and recreational institutions.

The existing management practice in Ukraine has proven that the creation of family homesteads with everything necessary provides investments of at least 300 thousand

hryvnias for 10 years. If we consider the territory of an average Ukrainian village, its area is 250 hectares, and then the investments of private individuals in this village will amount to 75 million hryvnias for 10 years or 7.5 million hryvnias annually. Also, environmentally safe products worth at least 2.5 million hryvnias will be grown annually. The revival of 600 settlements that were erased from the map of Ukraine during the period of independence, and 600 villages that are on the verge of disappearing, will provide employment for 100 thousand workers over the next 10 years and new investments in the amount of 9 billion hryvnias per year, production of environmentally safe goods for the sum of 3 billion hryvnias. One of the advantages of the settlers is the planting of barren trees on their areas of at least 0.3 hectares, a green fence around the perimeter, the creation of a self-sufficient and harmonious ecosystem that requires very little human intervention for its functioning. In the mentioned villages, workers will plant 100–150 thousand hectares of forest, saving up to 1.5 billion hryvnias of state investments for soil protection measures (Family, 2021). The increase in settlements will contribute to the increase in employment in the service sector, provided that service organizations, new enterprises, including high-tech ones, preservation and revival of cultural institutions, functioning of kindergartens and other elements of social and industrial infrastructure are created. The described actions will lead to the development of savings in the family budget, physical health, reducing the burden on the city infrastructure, the development of new settlements, as a result, the creation of new jobs and the service sector. We believe that all elements of the management process are important: from development, adoption of a decision to its high-quality implementation and flexibly at all stages. And although the management behavior algorithm provides for a balanced and formed procedure (identification of the problem, determination of the factors of the internal and external environment, criteria for the effectiveness of choosing the optimal solution, its selection, approval, design, resource provision and implementation), however, especially recently, it is of increasing importance in the behavior of the administrative personnel acquire innovative and creative approaches, search and implementation of non-standard solutions (Fig. 2).

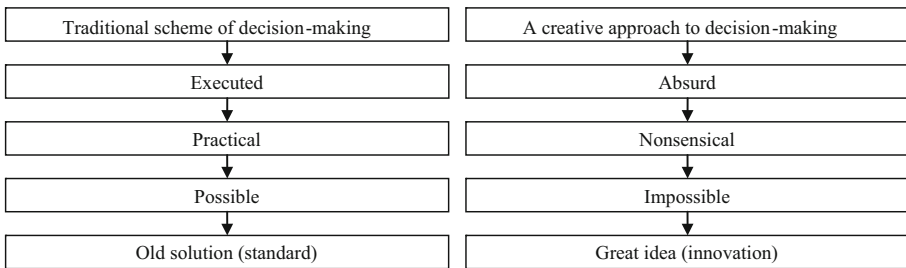


Fig. 2. Conceptual differences in the management process Source: own research.

Family homestead settlements as purposeful communities focused on communication, cooperation and holistic integration of human activity with the environment. The obtained results demonstrate the system of communication, production and from the standpoint of mastering the permaculture system and the development of alternative

settlements as a consequence of the transformation of social life from the predominance of ecological and social priorities. The focus on sustainable development, the use of renewable energy sources, waste-free living and noospheric approaches in education and training, both in theory and in practice, is obviously a current trend. It is based on the concept of conscious consumption, individual responsibility for the future of the planet, and the prevention of exclusive materialism as a way of life. Modern trends in society provoke the process of rethinking life in a multi-vector manifestation and long-term perspective. The systematized nature of the mechanisms for ensuring the development of such territories is shown in Table 4.

Table 4. Mechanisms for ensuring the development of territories

Mechanism	The essence of the mechanism	Positive aspects of implementation	Negative aspects of implementation
Individualization	Individualization provides for specialization in production and social processes	<ul style="list-style-type: none"> - increase in the number of small and medium-sized business structures; - maximum satisfaction of individual interests; - development of service cooperation, consulting and consulting; - development of horticulture cooperatives 	<ul style="list-style-type: none"> - increase in public costs for management and administration; - increase in the price of public services
Concentration	Concentration of resource, for example, land, in particular, landscape, human, material and technical, technological capital in priority sectors	<ul style="list-style-type: none"> - presence of competitive advantages, - the possibility of industrialization of processes and benefits due to the effect of scale, - maximization of income and profits; - preservation of the national historical and cultural heritage; - the spread of a strategic approach in management; - activation of the activities of territorial communities, expansion of their regulatory, organizational, financial and control functions; - development of public-private partnership 	<ul style="list-style-type: none"> - strengthening of structural asymmetries and disproportions, - a decrease in the level of employment, - strengthening of migration processes, food dependence, including import dependence - deterioration of the ecological situation, - growth of corporate and decrease of individual benefits; - corporatization and monopolization of production and life processes

(continued)

Table 4. (continued)

Mechanism	The essence of the mechanism	Positive aspects of implementation	Negative aspects of implementation
Integration	Integration provides for the creation of agricultural towns that combine the characteristics of the city and the village	<ul style="list-style-type: none"> - combination of production and income function with the possibility of diversification, recreation on the territory; - organic production; - implementation of innovative technologies; - creative technologies in life and management; - complexity of the public sector of development; - outsurfing practice of green tourism 	- transformation of the agrarian environment into a complex one
Biomimicry	Biomimicry of socio-economic processes	<ul style="list-style-type: none"> - development of biodiversity; - strengthening the stability of the territory; - strengthening cooperation (primarily socio-economic) with urban agglomerations; - waste-free living, permaculture design, noosphere approaches in education and training; - development of service cooperation and consumer unions; - public management and administration; - development of family homesteads and family homestead settlements; - raising the level of culture and spirituality of the nation; - revival and multiplication of the natural resource potential of the territory 	<ul style="list-style-type: none"> - change of the existing structure inherent in the market economy in favor of the principle of reasonable sufficiency; - the need for neutralization and disposal of accumulated waste

Source: own research

Family homesteads in the context of the development of entrepreneurship are currently becoming a cultural and economic phenomenon, which not only deals with the creation of new goods, works and services, provision of public needs, creation of new jobs, but also a factor of general economic stimulation of raising the level and quality

of life of society, the popularity of social responsibility, volunteerism, charity, activities of non-profit organizations, national-patriotic movements (entrepreneurship with pure thoughts). Being determined by the characteristics of a person, his values and skills, the formation of a system of intentions, internal and external priorities and determinants, entrepreneurship at the modern stage becomes ecologically oriented, social, aimed at the search for innovative solutions, unresolved problems of society and ecology, regulating the activities of public institutions on the basis of sustainable development - ensuring equality in the implementation, preservation and multiplication of psychological, social, economic and ecological opportunities for future generations, creation of values capable of ensuring economic prosperity, social cohesion and environmental protection, in particular in the fields of tourism, entrepreneurship and management (Fig. 3).

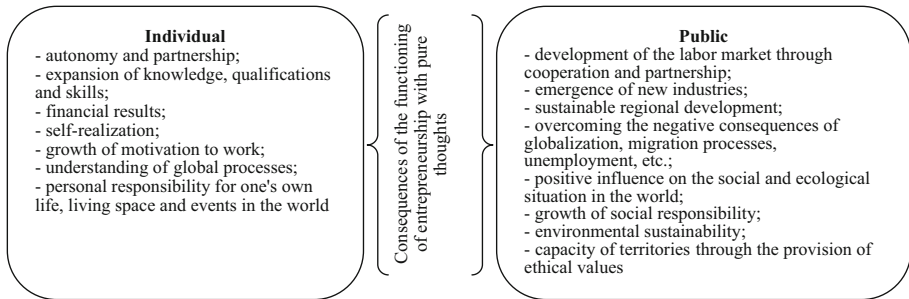


Fig. 3. Consequences of functioning of sustainable entrepreneurship Source: own research.

Additional factors influencing the choice of an individual are the presence of available information (13%), popularization of values (25%), the result of counseling and mentoring (33%) and other factors of the formation of conscious consumption (29%). Under such conditions, the state is the initiator of the regulation of consumer behavior at the level of environmental standards, the formation of a national policy of balanced structural and systemic development, focused on ensuring a guaranteed level of opportunities for personal growth, access to resources, popularization of the best examples of human culture, and the formation of a system of high ideals and moral values. A sufficient standard of living will promote the creative expression of personalities (according to this survey, a low level of income does not affect the level of responsibility of an individual, while an average and high level of income determines a higher level of needs for the quality of service and other consumer preferences). Studies of the values and behavior patterns of individuals demonstrate a higher degree of desire for intercourse and communication in such individuals, as well as increased awareness of the state of the environment, climate changes, and attitude to life. Considering the above, these tools should be used to promote the highest values of society and the consumer behavior of individuals, making their choices conscious in the context of sustainable development.

The potential of social capital in society can be fully and effectively realized through such institutions of civil society, in particular, socio-political movements and organizations. As a result of their development on the world stage, the following forms of community became: traditional communities, conscious communities, eco-settlements

and family homestead settlements. The orientation and possibility of development are determined by time. The decisive principles of development are: 1) multi-level objective reality of the unity of energies of time and space of different polarity, intensity and frequency of vibration of the whole; 2) multiplicity, universality of implementation of functions and tasks, mutual complementarity, which confirms its expediency in accordance with the conditions of development of the Universe; 3) the presence of impulse energy is a vector of energy cluster development. Optimizing human-nature relations is implemented through the harmonization of human interactions with natural systems through organic farming, permaculture design, rational nature use and means of livelihood, satisfying consumer needs, restoring the potential of natural resources, introducing renewable energy sources, adequate methods of education and professional training in improving the energy system of certain parts of the world as a whole. This is precisely the case of the «Family Homestead» project implemented in Ukraine, the implementation of which is accompanied by the appearance and growth of new settlements in rural areas at the expense of immigrants from cities. With all the problems of Ukraine, the fact of interest of citizens of the European Union and other countries of the world is confirmed by visiting family homestead settlements for a period of 1 to 4 weeks with habitation in family homestead settlements. Scientific workers from the EU also came to family homestead settlements to familiarize themselves with this form of social organization. Thus, the «Family Homestead» project can serve as a foundation for multifunctional development; a source of investment; solving demographic problems; increasing employment of the population; reduction of budget expenditures on unemployment benefits; the «alternate airfield» for every family.

4 Conclusions

In order to solve the issue of the development of socio-economic systems based on the «Family Homestead» project, it is necessary to make some changes to the current legislation. Introduce into the legislative field the concept of lifelong use of a plot of land for the arrangement of the family homestead «FH», without the right to sell it and with the right to transfer this plot into inheritance. In the absence of heirs, the plot is returned to the state. Determine the size of the land plot for arranging the family homestead – 1 hectare. The specified plot must consist of a single landmass. Citizens of Ukraine who already have homestead plots of land in rural areas in accordance with current legislation, but have the desire and opportunity to increase them to 1 ha, should grant them the status of FH. Citizens of Ukraine who own or rent plots of land in accordance with the Law of Ukraine «On Private Peasant Farming» and would like to receive the status of FH, must indicate the size of the plot of 1 hectare. Land plots allocated for the development of «FH» are not subject to taxes. Products produced on such plots of land should also not be taxed. Depending on the topography of the area where the land plot is located (1 hectare) and according to the requirements of the relevant state authorities, from 30 to 50% of the plot should be planted with non-fruit trees. Environmental requirements for the users of such land plots must be established by the relevant state bodies. Provide the state program «FH» with an approximate charter of an ecological settlement, which can be used by a voluntary community of citizens of Ukraine who have organized settlements on free,

uninhabited and undeveloped land in rural areas in order to organize the life activities of its members while complying with the requirements of ecology, land protection, and general human values in social life.

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

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Blockchain Technologies in the Conditions of Digitalization of International Business

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Abstract. The article examines the current situation in the sphere of blockchain technologies in the international business space and solutions that will create a positive climate for the introduction of blockchain technologies in international economic relations are highlighted. Trends in the development of blockchain technologies in the field of international economic relations are analyzed. The principles of legal regulation of blockchain and cryptocurrency in the most developed countries of the world are considered. An important problem in the implementation of blockchain, in addition to legal regulation, remains the lack of understanding by the majority of managers, civil servants and owners of small, medium and large businesses of the principle of operation of blockchain technologies and their potential advantages for the country's economy. The experience of blockchain implementation at enterprises of various spheres in EU, which can be useful for Ukraine, was studied. Companies with the largest capitalization that use blockchain platforms are indicated. The advantages of using blockchain in trade have been revealed. Trade is an area where the EU and Ukraine can cooperate in implementing blockchain technology and then use this technology to strengthen economic ties. Due to the fact that the field of innovative technologies is actively developing in the world, more progressive countries can influence the adoption of cryptocurrencies and blockchain technologies by other countries at the state level.

Keywords: Blockchain · Cryptocurrency · Bitcoin · Technology · Economy · International economic relations

1 Formulation of the Problem

The words “blockchain”, “cryptocurrency” and “smart contracts” can be heard more and more often in the conversations of the majority of the world’s working population. Of course, only the most developed countries of the world dare to not only talk, but also introduce such technologies into the work of companies or state structures. Ukraine has many talented specialists, who are ready to help their motherland stand in line with the USA, South Korea, Germany and other countries that are leaders in the implementation of the possibilities of Industry 4.0 and 5.0. However, every year thousands of young and talented specialists go abroad in search of high-paying jobs.

The implementation of blockchain technologies in state and business structures will allow for effective management of resources, control of the quality of work and the quality of the resulting products. The highly developed countries of the world saw the possibilities of blockchain technologies as far back as 2017, and therefore began to implement such technologies in their work. However, the active work of some may come to nothing if there are countries that prevent or ban cryptocurrencies and blockchain technologies, thereby developing a shadow economy.

2 Literature Review and Methodology

In the scientific environment, you don’t hear about blockchain often enough, this is due to the fact that the technology is still young and only after 2014, when blockchain technology was able to operate with any type of data, a process of global research and analysis of its capabilities took place. Among those who researched the blockchain, the following can be distinguished: S. Nakamoto [12], N. Roubini, M. Swan [13], S. Raval, M. Gur’eva, S. Rippa and others. However, no sources were found where anyone considered the application of blockchain technology in united territorial communities. Of course, the renowned mathematician and cryptographer Satoshi Nakamoto is a recognized expert in matters related to blockchain technology and cryptocurrencies. It was he who described the working principles of these technologies in his writings back in 2008, and already in 2009 implemented the first bitcoin wallet.

The purpose of the article is to study the current situation in the field of blockchain technologies in the international business space and to identify solutions that will create a positive climate for the introduction of blockchain technologies in international economic relations. To solve the set goal, theoretical methods of scientific research were used: analysis - to determine the features of the use of blockchain technologies in the field of international economic relations, synthesis - to find opportunities for the implementation of blockchain technologies in the conditions of digitalization of international business.; generalization – for formulating conclusions based on research results.

3 Results of the Investigation

An important point for the world community is the assessment of the prospects for the introduction of innovative technologies into the world economy, the economy of individual countries, and individual sectors of the economy. However, the primary issue

at the stage of consideration of possible options for modernization of the economy is the problem of legal regulation. In the EU, USA, China, Singapore, South Korea and other countries, the foundations of legal regulation of the cryptocurrency market and the blockchain industry were laid much earlier, in contrast to Ukraine, where only on December 2, 2020, the Verkhovna Rada of Ukraine voted in the first reading for draft law 3637 “On virtual assets”, which marked the beginning of the legalization of the cryptocurrency market in Ukraine [1].

Only in 2019–2020, about 3 thousand patents were issued in the field of blockchain, which is several times higher than the indicators of the period 2014–2019 [2]. In terms of percentage, the USA patented 39% of the total number, South Korea – 21%, China – 19% [3].

The absence of relevant laws means that settlement with cryptocurrency, which does not have a legal status, can be illegal, which brings significant economic losses to the state in the form of uncollected taxes from cryptocurrency accumulations and transactions, as well as lost profits due to the failure to provide possible services and insurance guarantees to owners of crypto wallets. Moreover, ignoring the development of blockchain technology at the state level can lead to the growth of the shadow sector of the economy.

Legal regulation of blockchain and cryptocurrency in the most developed countries of the world is carried out according to the principles indicated in Table 1 [4].

In addition to legal regulation, an important problem in the implementation of blockchain remains the lack of understanding by the majority of managers, civil servants and owners of small, medium and large businesses of the principle of operation of blockchain technologies and their potential advantages for the country’s economy. Therefore, it is worth paying considerable attention to this problem.

It is worth noting that the transition to blockchain technologies is being carried out more and more recently. Quite a few well-known companies in the field of trade in goods or services already have significant success in this direction. Table 2 lists ten world-renowned corporations that have partially or fully switched to blockchain technology, as well as the platforms they use (ranked by company capitalization in descending order). All the companies listed in the table are registered in the United States, since this country is one of the first to introduce legal regulation of blockchain and cryptocurrency, and therefore government organizations that are involved in the control of the payment of taxes from all types of company activities were able to create certain tools that became levers of influence on the collection of necessary data on the activities of companies, which greatly reduced the risk of them ending up in the shadow market.

The EU also has experience in implementing blockchain at enterprises in various fields, which can be useful for Ukraine [5]. Among the main areas:

- a) *Logistics*. With the help of the use of blockchain, IT technologies and self-driving trucks, a decentralized supply chain can be created both in the country and in international deliveries from the EU. This approach is actively studied [8] and used in the EU. For example, the process of fuel delivery has always been and remains important for the country’s economy, since the work of many enterprises, gas stations, etc. depends on the availability and timely delivery, but this process in the traditional view has many shortcomings [6]. The process of loading fuel into trucks, obtaining

Table 1. Aspects of legal regulation of blockchain and the use of cryptocurrencies in some countries of the world

Country	The legal status	State regulation
USA	Cryptocurrency is considered and equated to existing money and assets; transactions with cryptocurrency should be taxed like transactions with other assets	Legislation is being developed that will regulate cryptocurrency transactions without the direct involvement of centralized authorities. In 2020, an item was added to the income statement "Cryptocurrency Investments"
Germany	Virtual currency is a financial instrument. Considered as a unit of account in comparison with foreign currency, but does not refer to legal tender	Under the law, cryptocurrency is a form of "private money" that can be taxed as capital. The creation of virtual money, as well as its use as a means of payment, does not require any permissions. If virtual money is sold, it is considered a financial instrument and requires licensing under the German Banking Act
Austria	Cryptocurrency is treated by tax authorities as an intangible asset	Cryptocurrency mining is treated as an operational activity. Income received as a result of its implementation is subject to income tax
Finland	Virtual currency does not meet the definition of a currency or even an electronic form of payment, the Central Bank classifies virtual currency as software that is a good	The Finnish Tax Administration has issued guidance on the taxation of virtual currencies: - when transferring virtual currency to any other, the rule of taxation of profit from capital gains is applied - when a virtual currency is used as a form of payment for goods and services, it is considered a trading instrument, and the increase in value that the currency could receive after trading transactions is taxable

(continued)

Table 1. (continued)

Country	The legal status	State regulation
United Kingdom	Digital currency, according to the UK Money Laundering Act, is a combination of numbers obtained as a result of complex mathematical calculations	The Financial Regulation and Supervision Authority of the UK does not recognize that Bitcoin is a currency, digital currency or money, therefore cryptocurrency in no way cannot be governed by UK financial law. New types of cryptocurrency in the UK are still outside the scope of financial regulation Нові види криптовалюти у Великобританії поки що поза межами фінансового регулювання

relevant bills of lading, permits, escort and navigation, drawing up a schedule - at each of these stages complications may arise, which are related to the mechanical actions of certain forces. Automation of these processes will not only speed up their execution, but also significantly reduce costs (autopilot - no costs for the driver, automatic filling and unloading of tanks - no costs for service personnel, automatic navigation and support - no costs for dispatchers, i.e. more than half of the working and administrative personnel becomes unnecessary) and will increase the productivity of their implementation [7]. This is just one of the many examples of the use of blockchain in the supply process that Maersk is successfully engaged in around the world. With their help, the processes of delivery by ship, air, and motor vehicles have been significantly simplified [8]. Such technologies could improve economic relations between Ukraine and the EU.

- b) *Finances.* The very concept of physical banks in the world is gradually becoming obsolete, as innovative technologies (cloud data storage, the presence of a smartphone in more than half of people [6], etc.) are displacing uncompetitive physical branches. For example, in Ukraine, the largest Ukrainian bank “Privatbank” partially switched to blockchain technology. In its work, the bank uses the technology of encryption of transactions, the use of an electronic access key, and also gives every Ukrainian the opportunity to open his crypto wallet [14]. The largest company that enables banks to move from traditional technologies for processing customer requests to innovative blockchain technologies is *we.trade*, which develops blockchain platforms that reduce the process of processing credit requests from 7 days under the old scheme of work to 1 h on blockchain platforms [9].

Figure 1 shows the difference in the decision-making process of the old and new models. This became possible due to the automation of most of the processes of consideration of the client’s attractiveness for the bank, the complete absence of paper work and the decentralization of the work of banks [10].

- c) *Production and delivery of products.* Controlling every food-related process is critical to the operation of any food-handling establishment, from grocery stores to

Table 2. Companies with the largest capitalization that use blockchain platforms [4]

Nº	Company	Country	Industry	Capitalization, billion US dollars	Blockchain platform
1	Microsoft	USA	Software	1622,92	Ethereum, Parity, Quorum, Corda, Hyperledger Fabric
2	Amazon	USA	Online retail	1590,55	Hyperledger Fabric, Ethereum
3	Google	USA	IT	1234,28	Bitcoin, Ethereum, Bitcoin cash, Ethereum classic, Litecoin, Zcash, Dogecoin, Dash
4	Facebook	USA	IT	801,311	There are no data
5	Visa	USA	Finances	447,269	Hyperledger Fabric
6	Walmart	USA	Retail	419,877	Hyperledger Fabric
7	JPMorgan Chase	USA	Banks	374,197	Quorum
8	Mastercard	USA	Finances	338	They use their own platform developments
9	Comcast	USA	Telecommunications	236,316	Bitcoin, Ethereum, Hyperledger Fabric, Quorum
10	Intel	USA	Microprocessors, computer equipment	213,178	Corda, Ethereum, Hyperledger Fabric, Hyperledger Sawtooth

catering establishments. From the stage of growing grain to the moment of selling bread, there is a need to control the quality of products, storage and processing conditions. This, in turn, requires large expenditures of both monetary resources and human capital. Since blockchain technology allows participants to follow each other, and, accordingly, actions and transactions, the quality of the relationship with the product increases several times. Automatic control of the crop in greenhouses, automatic collection, automatic transportation, control of cooking quality - all this is possible thanks to the implementation of blockchain technologies.

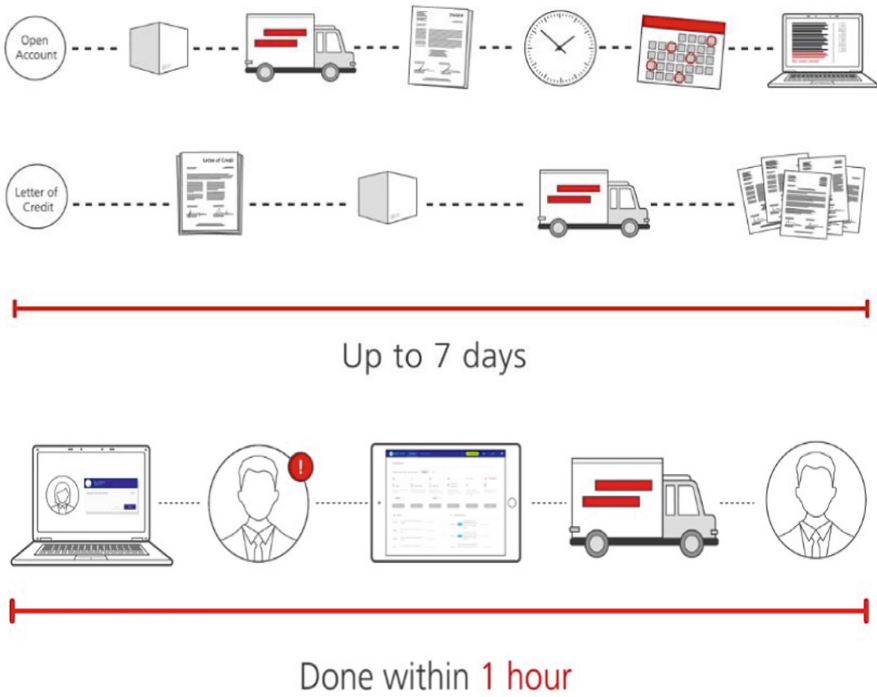


Fig. 1. Comparison of the old decision-making model with blockchain [9]

Trade may be one of the most promising areas of cooperation between Ukraine and the EU in implementing blockchain technologies. This is due to the following advantages when using blockchain [11]:

- confirmation of the correctness and transparency of concluding contracts. In order for the seller and the buyer to have a relationship of trust regarding the quality of the product, its proper storage, in insurance cases blockchain helps to store information that is reliable, that is, its intentional change to false will be reflected in the system and can be easily checked.
- technologization of service processes. When the buyer buys the product, he receives a warranty card, purchase receipt, serial number indicated on the package. In the event that the buyer needs to return the product for warranty reasons, send it in for repair, or replace it with a new one, he must have with him all the documents confirming the ownership of the product (check, warranty card, packaging). This is an inconvenient procedure for customers, therefore, when using the blockchain, all information about the purchase process (time, place of purchase, warranty card, product serial number) can be recorded in blocks, which will significantly speed up and facilitate the storage process for both the buyer and the seller information about the product.
- online ordering. When buying a product through an Internet site, buyers often choose the option of issuing an order in one of the branches of the network. However, the number of sales consultants serving the issue of online orders is often limited and

insufficient. They check the order number, confirm the buyer's identity via passport number or phone. All procedures can be shortened if the buyer has a public and personal electronic key, which is used to confirm the identity in the blockchain system. Goods can be issued automatically at the points of issue of the order even without the help of a person.

- system of discounts. Many networks of large companies use a system of personal discounts for customers, which can also be successfully implemented through the blockchain system: customer data, his personal account number in one or another store, his personal discount can be recorded in blocks.
- reducing the level of bureaucracy and corruption. The transition to a system in which there are no intermediaries at all, and there is only a buyer and a seller, greatly simplifies the work of all organizations in the field of trade. You can get rid of queues at checkpoints at customs, unplanned inspections by tax authorities, etc. All information can be stored in a single system and be available to all users. It is impossible to change information without changing all previous blocks or hiding it.

Therefore, trade is an area where the EU and Ukraine can cooperate in implementing blockchain technology and then use this technology to strengthen economic ties.

4 Conclusions

Due to the fact that the field of innovative technologies is actively developing in the world, more progressive countries can influence the adoption of cryptocurrencies and blockchain technologies by other countries at the state level.

Prohibition or insufficient regulation of cryptocurrencies and projects based on blockchain technologies leads to significant losses in the form of non-payment of taxes. Such a conclusion can be drawn if you calculate the market value of an individual bitcoin cryptocurrency and transfer it to the sphere of the shadow economy, since the lack of government regulation automatically makes bitcoin an element of the shadow economy. So, at the exchange rate of 30,000 US dollars for 1 BTC, the capitalization is 630 billion US dollars, an amount that becomes an element of the shadow economy. At the possible rate of Bitcoin in 2024, 1 BTC in 3 years could be worth from 400 thousand to 1 million USD. Accordingly, the funds lost in the shadow economy will grow exponentially. And if we take into account that there are hundreds of fast-growing cryptocurrencies, then trillions of dollars in losses in the form of lost profits - the shadow economy await us in the near future.

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Encountering Jaycustomer at Hospitality Business: The Roles of Staffs' Experience and Age in Determining Workplace Stress

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Abstract. Jaycustomer is not uncommon in the hospitality business. Service employees are experiencing mistreatment behaviour caused by them almost daily during the service delivery. This type of customer behaviour, therefore, with considerable accumulating amount of maltreatment would reflect the employees' work performance or withdrawal from work due to distress. However, the impact of the jaycustomer behaviour on employees is much depending on their socio-demographic. The purpose of this study is to assess the impact of age and experience at work on employees' stress level when encountering the jaycustomer behaviour. A total of 322 employees of hospitality business participated in the online survey of this study. Three linear model were assessed in this study where the OLS regression result showed that the addition of age and experience in Model 2 and Model 3 significantly decrease the level of stress among employees. The result of further investigation has proved that young employees are less stress compared to senior employees in terms of age and experience. It is recommended that providing training according to level of experience and age on controlling and handling the customer would help employee to handle the stress and able to take action before it accumulated.

Keywords: Jaycustomer · Age · Experience · Hospitality · Workplace stress

1 Introduction

Pleasing a customer is an utmost factor for businesses, particularly in real-time service interaction in hospitality industry where the customers are more demanding than others. 'Customer is always right' is a mojo of any hospitality business; and whoever willing to comply with every request from the customer would secure the success of their businesses. Providing the best services with kind and patience have never failed to bring customers' satisfaction. For example, food quality and service quality are both responsible to a satisfied meal experience by customer [1]. Moreover, in quick service

restaurants in the UK, responsiveness, assurance, and substantial services plays great roles in leading to customer satisfaction and better understanding customers' wishes view as a way to remain in the streamline of industry [2].

However, on the other side of the coin, customers' misbehaviour or deviant attitude received by employees during the service delivery has become a recognised problem in service industry like food and beverage sector. A term popularized by many previous studies called 'jaycustomer' is defined as the customer shows improper action in any service encounter at any establishment that offer services [3, 4]. Other terms used for that misbehaved customers are 'deviance customer' [5]; 'customer mistreatment' [6]; and 'disruptive customer' [7] which all indicate the customers who caused service failures at any business establishment.

Jaycustomer behaviour may occurs unknowingly or intentionally exhibit within individuals. It occurs when a customer has an argument with other customers in the same service establishment [7]. Or else some customers might want a monetary advantage from the organisation at the first place [8]. According to [4], customer misbehaviour may occur when they are under the influence of alcohol, and some may intend to sexually abuse the employees either vocally or physically. Moreover, it could occur when an employee makes a mistake or misconduct when delivered the service which caused an extreme emotional response from the customers.

1.1 Jaycustomer Category

In hospitality industry, the disruptive behaviour caused by customers can be classified into two main classifications which are action either verbally or physically to the by-standing customers, to the establishment properties, to the employees and generally, to the business operation. Several studies specified multiple categories of service-specific customer misbehaviour in the hospitality industry which could be included as verbally and physically harmful. A study [9] identified six forms of jaycustomer: "the rule breaker", "the thief", "the belligerent", "the family feuder", "the vandal", and "the deadbeat". Meanwhile, an empirical study classified eight types of jaycustomer behaviours in service: "compensation letter writers", "undesirable customers", "property abusers", "service workers", "vindictive customers", "oral abusers", "physical abusers", and "sexual predators" [4]. Six categories of behaviour found in restaurant employees in Turkey: "verbal attack", "offending good moral", "physical attack", "theft", "sexual harassment", and "condescending behaviour" [10]. Other categories recognized as "customer aggression" [11], "customer incivility" [5] and "drunken" behaviour and "uncooperative customers" by [3].

In the similar vein, this study focuses on the following three categories of jaycustomer behaviour in the hospitality industry which consists of two main classifications as mentioned above. There is egoistical customer, sarcasm customer and aggression customer. Egoistical customer behaviour can be defined as individual using disrespectful language, verbally threatening, having argument and show bad intentions to humiliate employees. This type of behaviour is commonly found in previous studies occurring in hospitality industry, particularly in food and beverage sector. These incidents may occur due to customer character flaws, to show strength and feeling superior towards the employees [10].

Sarcasm customer in this study refers to the customer misbehaviour that delivers cynical comments, spoke rudely, yelling, insulting and makes mocking/sarcastic facial expressions towards the employees to show protest or dissatisfaction with the service provided. Service failure is one of the reasons the occurrence of this misbehaviour. [12] described that service quality and performance of the service employees are shaping the customer satisfaction, and different customer perceives differently towards the service provided by the same employee. For example, employee A serves all the clients in the restaurant fairly, but the level of acceptance of the service delivered from customer A might be distinctive from customer B which would cause a service failure to them. On the other hand, a service failure could happen owing to employee unintentionally lapse such as dropping the food or deliver a wrong order. This service failure will eventually trigger the character flaws and more disruptive customer behaviour [10].

Following on that, service failure is a preliminary factor that spark more belligerent behaviour of customer which refer to aggression customer. Aggression customer in this context defined as physically misconduct by customer. This includes intentionally causing damage to the business properties, hitting, or attacking the employee and even causing injury to others [13]. According to [4], physical attack by this aggression customer might happened with or without weapons depending on the situation and this physically abuse might be caused by the influence of alcohol and drug. For example, in restaurant, cutleries can easily be a weapon to act against the employees when someone act in a drunken state or intentionally act to show anger. With the same idea in mind, sexual harassment which also an aggression action often found among service employees, particularly women. This harassment could occur when a customer making comment or acting in such a way to express sexual advances towards employees with or without intention.

1.2 The Effect of Jaycustomer Behaviours on Employees

Jaycustomer behaviours as an influential factor of service quality and satisfaction of other customer and indirectly may influence to the job satisfaction and lead to job stress among employees. Employees in hospitality industry are deemed to be one of the most stressed employee populations at any time and requires real-time customer interaction along with the ability to provide a quality service. For example, work in a food service establishment is very challenging. The requirement to maintain a publicly observable and acceptable emotional display means that employees can experience distress when facing to thoughtless or discourteous comportment on the part of the customer [4]. At the same time, employees in a casual dining restaurant manage with high levels of workload caused by the nature of working in the industry that requires the employee to work in shift, long working hours, do repetitive tasks, and face customer needs and wants [14]. When the employees perceived negativity in their surroundings, they tend to develop pressure, hence, the unnecessary stress would certainly appear.

Job stress interpreted as an individual's concern of their work which they find it difficult to utilises their creativity fully at work [15] that caused pressure and emotional exhaustion [16]. The consequences of job stress certainly portray on how the distressed employee exhibit work effectiveness [17]. For instance, stress impedes someone productivity, absenteeism, health, economic and possible premature retirement from the

industry [18]. With the nature of the workplace environment, dealing with jaycustomer behaviours undoubtedly add to the mental health and emotional tension to an employee. According to [19], the higher level of job stress can lead to lower mental health which sooner or later could be harmful for them and people surrounding them.

Alternatively, workplace stress ensued from disruptive behaviours from jaycustomer substantially associated with personality and demographic factors of the employees. [20] mentioned that human characteristics such as age, marital status, experience, gender, and education are important to understand customers' past misbehaviours. Those personal factors play a part on how someone perceived misbehaviour caused by customer. It could be seen as positive or negative which registered as a typical job stress or unnecessary stress at work. For example, employees who have working experience in the same industry, their intention to leave the job is decreasing as the experience increasing [21]. Moreover, mature employee seems to handle the misbehaviour well based on the past behaviour he or she encountered previously, if compared to younger employee [20]. This indicates that job stress caused by jaycustomer hypothetically influenced by employees' personality; and however, empirical investigations of the association between them are rare. In particular, no such study in Malaysia so far had been done, particularly in food service industry.

With that in mind, the aim of present study is to explain the roles of two personal characteristics, age, and experience, on the job stress caused by three jaycustomer behaviours. This shows a significance to conduct such study as it will enrich the services marketing literature in hospitality industry by recognizing external factors that could give an impact to the workplace stress. Eventually, with the robust findings of this study, age and experience of employees would make businesses understand and more options to handle the jaycustomer in the future. The paper is designed with four sections as followed: (1) Introduction; (2) Methodology; (3) Results and discussion; and (4) Conclusion and future research recommendations.

2 Methodology

2.1 Data Collection

The total sample of 322 employees of service department in any hospitality establishment were collected in Kuala Lumpur via convenience sampling. Kuala Lumpur, capital of Malaysia, was chosen as the main geographical area of the study as more than 100 hotels, motels, fast food restaurants, casual dining restaurants and coffee shops were located in that metropolitan. Questionnaire was chosen as the instrument to collect the information of the study. The questionnaire contained six sections. There were consent statement, demographic, three jaycustomer behaviours and job stress as the outcome variable of the misbehaviour. The aims of the study were written clearly in the consent statement together with the ethical information and respondents who willing to participate need to agree prior continued to the next section. As abovementioned, three jaycustomer behaviours were chosen in this contextual study. Egoistical customer, sarcasm customer and aggression customer were measured with five items drawn from previous studies. While job stress was measured with nine items adopted from previous study and written based on the local perspectives. Each of the item is measured with 5-point Likert scale

ranging from strongly disagree to strongly agree. The questionnaire was piloted before actual data collection.

Due to the COVID-19 pandemic, the questionnaire was distributed remotely through online platform to the target respondents. To keep social distance between respondents and to avoid direct response sessions, using Google Form; one of the applications by Google, as online platform ensures the safety of both parties. The link was given to the various hospitality establishment in Kuala Lumpur to be dispersed to their employees. The responses would only be filed in via online and according to Internet World Statistics, about 50.3% of Asia population has access to the internet. This method is believed to able generate reliable data for the study.

2.2 Model Specification

This empirical study focuses to predict the job stress as outcome variable under the effect of three jaycustomer behaviours and two external variables. Three models specify as follow:

$$\text{Model 1: } y^*(\text{JS}) = x'_1\beta(\text{EC}) + x'_2\beta(\text{SC}) + x'_3\beta(\text{AC}) + \varepsilon \quad (1)$$

$$\text{Model 2: } y^*(\text{JS}) = x'_1\beta(\text{EC}) + x'_2\beta(\text{SC}) + x'_3\beta(\text{AC}) + x'_4\beta(\text{Age}) + \varepsilon \quad (2)$$

$$\text{Model 3: } y^*(\text{JS}) = x'_1\beta(\text{EC}) + x'_2\beta(\text{SC}) + x'_3\beta(\text{AC}) + x'_4\beta(\text{Experiences}) + \varepsilon \quad (3)$$

The models were analysed using estimation method of linear regression model called Ordinary Least Square (OLS) regression through STATA MP 16. In control model (1), observed Y (y^*) is known as the job stress (JS) expressed as the outcome variable of the linear equation; meanwhile “ β ” is the vector of expected regression coefficients of the three jaycustomer behaviour which represented by these acronyms EC as egoistical customer, SC as sarcasm customer and AC as aggression customer. In each of two other models, an explanatory variable inserted as believed to give impact on the job stress either positive or negative directly. Age and experiences proved to reduce the stress level of employees from the previous studies.

3 Results and Discussion

All responses were screened to ensure only the valid questionnaires were selected and 322 valid respondents had been accepted to be analysed in this study. To confirm the validity and reliability of the data collected, a reliability test was performed recommended values above Cronbach’s alpha 0.7 are considered accepted and all the continuous variables are reliable to generate compelling results to answer the hypothesis. After conformity of the validity and reliability, the further analyses were performed on the data. There are two sub-sections of this section. First, the OLS regression results to test the three models above; then, the section continues with the further analysis on the differences within group (age and experience) through the analysis of variances (ANOVA).

3.1 Model Testing on Contributing Factors on Job Stress

Table 1 represents the outcome of three linear models as shown in equations above. All the models are statistically significant at, $F(3, 322) = 137.12, p = 0.00$ for Model 1, $F(4, 322) = 106.47, p = 0.00$ for Model 2 and $F(4, 322) = 106.66, p = 0.00$ for Model 3, respectively, which indicated that, the models applied can significantly predict the job stress as dependent variable. Furthermore, the R^2 of the three models demonstrated substantially reliable to explain more than 50% of variances proportion the connection between job stress, jaycustomer behaviours and external factors, age, and experience. For example, in Model 1, $R^2 = 0.56$ (Adjusted $R^2 = 0.56$) suggested that three jaycustomer behaviours explained 56% of the variability of job stress at workplace in the population. Likewise, the other models similarly showed the same trend where the independent variables explained 57% of variance proportion in the job stress; where Model 2 with $R^2 = 0.57$ and Model 3 with $R^2 = 0.57$.

Table 1. OLS regression analysis for model testing.

Variables	Job stress					
	Model 1		Model 2		Model 3	
	β	SE	β	SE	β	SE
Constant	0.95	0.10	0.81	0.12	0.75	0.13
Egoistical	0.26	0.06	0.28	0.06	0.28	0.06
Sarcasm	0.34	0.06	0.31	0.07	0.31	0.07
Aggression	0.23	0.04	0.22	0.04	0.23	0.04
Age			0.10	0.04		
Experience					0.10	0.07
F	137.12		106.47		106.66	
R^2	0.56		0.57		0.57	
Adjusted R^2	0.56		0.57		0.57	
N	322		322		322	
Prob > F	0.00		0.00		0.00	

Through the OLS regression analysis, the results revealed that adding external factors such as age and experience significantly determine someone stress level, even a slight shift of the coefficient of the variables ($X\beta$) if compared to Model 1 as shown in Table 1. Even though, age has small margin towards the determination of job stress ($\beta = 0.10$) as shown in Model 2, every unit increase of sarcasm behaviour, a 0.31 unit increase in employees' job stress, which statistically lowered by 0.04 unit ($X\beta$) in Model 1. Similarly, the coefficient of aggression jaycustomer behaviour is also lowered at 0.01 unit from after adding age as personal factor. On the other hand, employees' age also influentially negatively affected by the coefficient of job stress caused by egoistical jaycustomer. The addition of age as the predictor has increased 0.02 unit of job stress among hospitality

employees. Generally, a personal predictor would either positively or negatively affected the workplace stress when dealing with jaycustomer behaviour.

Specifically, a further variance analysis (ANOVA) showed that employee's job stress is increasing when dealing with sarcasm jaycustomer behaviour as employees' age increasing. Table 2 represented the details of ANOVA and post-hoc analysis. The results found that there are significant differences between groups as determined by $F = 10.40$, $p = 0.00$. A Tukey post-hoc test was statistically significant between the young-aged employees (18 to 23 years old) and two middle-aged employee groups (24 to 29 years old and 30 to 35 years old) at $p = 0.00$ for both. The results signified mature employees is more stressful when facing jaycustomer behaviour, if compared to younger employees at mean differences $t = 0.603$ for group 24 to 29 years old and $t = 0.834$ of 30 to 35 years old employees. Contrarily from previous study by [20] who stated that mature employees are able to handle the jaycustomer well than young employees. However, the statement supported the other significant results between employees age at 30 to 35 years old and employees who age 41 to 46 years old. The outcomes suggested that increasing in age would decrease the stress level at mean difference at $t = -0.880$ as shown in Table 2.

Table 2. One way ANOVA between job stress and age.

Tests of between-subjects effects						
Dependent variable: job stress						
Source		Type III sum of squares	df	Mean square	F	Prob > F
Between groups		36.67	4	9.17	10.40	0.00
Within groups		279.48	317	0.88		
Total		316.14	321	0.98		
Post-hoc Tukey						
Age		Mean difference	SE	Sig.	95% CI	
					Lower bound	Upper bound
18 to 23	24 to 29	0.603	0.120	0.000	0.275	0.932
	30 to 35	0.834	0.165	0.000	0.381	1.286
30 to 35	41 to 46	-0.880*	0.346	0.085	-1.829	0.071

* Confident interval (CI) at 10%

While age robustly abrupted the coefficient of jaycustomer in Model 1, experience of the employees as well showed a marginally change in Model 3. Similarly, an addition of personal factor, experience, had change the beta coefficient of sarcasm jaycustomer behaviour by decreasing 0.03 unit from Model 1 to Model 3. As shown in Table 1, a sarcasm customer had caused growing stress at workplace by 0.34 unit; if compared with only 0.31 unit increase in Model 3. Unlike in Model 2, experience did not have any influence to reduce the job stress level when the employee is dealing with aggression and egoistical customer. Experience has further increased the job stress level for egoistical

customer by 0.02 unit and remain at the status quo of 0.23 unit increased. It could be concluded that more experience the employees had, working as service providers, their job stress would also be increased, most probably due to the other factors such as age, strength, or salary. This showed a reverse result by [21] which indicated that more experience, less intent to drop from the job.

Further details from ANOVA analysis supported the regression outcomes as represented in Table 3 below. The results found that there are significant differences between groups as determined by $F = 8.60, p = 0.00$. Out of three group of experience, a Tukey post-hoc test was statistically significant between employees with 1 to 5 years and 6 to 10 years' experience. The finding suggested that as the employees with less experience have lesser job stress if compared with more experienced employees at mean difference of $t = 0.566$. This probably could happen with minimum experience in the hospitality industry, the employee might not have meet variety of customers, in comparison with senior employees. It is an undeniable reality where senior or mature employees would have faced a lot of jaycustomers and dealing with them would increase the job stress, even though they knew and well-rehearsed on how to handle those misbehaviours.

Table 3. One way ANOVA between job stress and experience.

Tests of between-subjects effects						
Dependent variable: job stress						
Source		Type III sum of squares	df	Mean Square	F	Prob > F
Between groups		16.17	2	8.08	8.60	0.00
Within groups		299.98	319	0.94		
Total		316.14	321	0.98		
Post-Hoc Tukey						
Age		Mean difference	SE	Sig.	95% CI	
					Lower bound	Upper bound
1 to 5	6 to 10	0.566	0.141	0.00	0.235	0.897

4 Conclusion and Implications

The aim of this study to elucidate the impact of age and experience of food service employees when dealing with jaycustomer. Consequently, the study contributes empirically to the existing literature by explicitly significant to those external factors towards the stress level of the employees. The hypothesis proved that age and experience of an employee link with the type of jaycustomer he or she is dealing with during service delivery at work. Through the OLS, the findings raise the importance of adding external factors are able to increase the robustness prediction of the study. There are significantly differences between Model 1 with Model 2 and Model 3 where age and experience would

cause stress level either increase or decrease among the employees. Depending on the types of jaycustomer behaviour, stress levels of employees are marginally decreasing with the addition of two external factors studied for sarcasm and egoistic jaycustomer behaviours.

Although customers' age is not subject to direct control and manipulation in this study, the findings indicated that young employees are less stressful when handling the misbehaved customers as they are probably eager to learn more and considers it as the learning experience by coping with the situation. On the other hand, senior employees, particularly group of middle-aged employees, are more affected by the jaycustomer action and becoming overwhelming with the situation even more. Align with that, much experienced employees are also having more stress when dealing with the jaycustomer if compare with less experience employees, who probably younger than them.

Identification primary factors of stressful working environment caused by the jaycustomer behaviours would help the organisation develop specific strategies to train their employees on how to handle certain types of customers. Providing training according to level of experience and age on controlling and handling the customer, eventually would help them reduce the stress as they are able to predict the situation and action that they are required to take. This training will help them to overcome the situation and how to manage stress during work. Moreover, by this also, it will help to improve customer satisfaction by preventing negative impacts of misbehaving customers towards other customer's service experiences.

There are two recommendations of the study that would provide insightful finding in the field. Firstly, obtaining personality traits of the service employees such as gender, educational level and income level would develop valuable insights into the literature of dysfunctional customer behaviour. Lastly, contextual focus of the current study has limited the generalisability where coffee shop workers were participated where other types of restaurants might provide a different and logically comparable explanation of the relationship of external factors with jaycustomer behaviours too.







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Conceptualizing Experience-Rich Sustainable Tourism

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Abstract. The tourism sector has put a great deal of strain and adverse effects on Langkawi's economy and environment. Such problems have endangered Langkawi's tourism sector and brought the island dangerously near to losing its UNESCO Global Geopark designation. Furthermore, little effort has been made to solve the issues. Instead of creating distinctive, sustainable content for the visitation experience that current visitors crave, the majority of tactics used up to this point have simply concentrated on enhancing governmental regulations and maintaining the aesthetic splendor of the surrounding area. This study is intended to fill these knowledge gaps by exploring aspects specific to developing a distinctive experience that is rich in the context of sustainable tourism. The purpose of this conceptual paper is to show how Experience-Rich Sustainable Tourism (ERST) might affect tourists' satisfaction. This study will enable tourism players to pay attention to the specific preferences of tourists and develop various experience-related activities and packages that suit the tourists' different tastes and demands upon visiting Langkawi. The study will extend the existing literature on ERST and satisfaction in the context of Langkawi as a destination.

Keywords: Experience-rich · Sustainable · Tourism · Industry

1 Introduction

In numerous locations around the world, tourism has been pushed. Many nations think that promoting tourism could help preserve the environment, improve social conditions, and boost economic growth [1]. The well-known island of Langkawi in Malaysia is likewise supporting tourism growth for greater economic gain. Langkawi may appear to be the ideal eco-destination for travelers who want to experience eco-island tourism [2]. However, there is a serious issue concealed behind the lovely geopark and white sand beach. The island's economy, society, and nature are all under a great deal of pressure from the tourism sector. Such effects have resulted in a decrease in visitors to Langkawi.

The Langkawi Development Authority (LADA) tourism performance report showed a pattern of dropping visitor numbers to Langkawi. However, Phuket and Bali have seen

an increase in visitors over the years, as have other Asian neighbor islands. As an illustration, Phuket, Thailand, saw a rise in tourist numbers from 13,274,769 in 2017 to 13,651,301 in 2018 [3]. The number of tourists arriving in Bali, Indonesia increased from 4,927,937 in 2016 to 5,697,739 in 2017, demonstrating the same steady trend [4]. Nevertheless, from 3.68 million to 3.63 million visitors in 2017, Langkawi saw a 1.4 percent decline in tourist visits in 2018 [5].

The diminishing tourist trend was caused by a number of problems, including the deterioration of natural resources and the land structure, damaging tourism activity, alteration of flora and fauna, pollution, poor infrastructure, a lack of water, and troubles with ferry services [6]. Due to these problems, Langkawi came dangerously near to losing its UNESCO Global Geopark designation, endangering the island's tourism sector [7]. Little has been done to address the problems and improve the island's infrastructure, which puts additional stress on the already fragile ecology.

There has been little prior study on experience-rich sustainable tourism published. The majority of research conducted to far have only examined several sorts of experiences, including memorable travel experiences (MTE), high-quality travel experiences, and others. Studies on eco-friendly travel practices, however, are frequently ignored. The goal of this study is to conceive the new Experience-Rich Sustainable Tourism (ERST) characteristics in the context of tourism in order to close these gaps. In order to develop a distinctive experience that is rich in the sustainable tourism environment toward visitor pleasure, this study aims to provide insight by examining factors like hedonism, novelty, local cultural, refreshment, engagement, meaningfulness, and knowledge. A framework for experience-rich sustainable tourism (ERST) is then proposed. As a result, this essay is structured as follows: the development of the proposals and conceptual framework, followed by a summary of the underlying theory, a review of the literature on revisit intention and experience-rich sustainable tourism, and lastly the paper's conclusion.

2 Literature Review

2.1 Experience-Rich Sustainable Tourism

Making unforgettable experiences has therefore been the foundation of the global economy and, more specifically, the tourism industry, as the economy has changed from a product-driven economy to a service-driven economy and then to an experience-driven economy [8–10]. This is due to the fact that the tourist sector is inherently an experience-based sector [9]. Destination managers can establish the destination's positioning and competitive advantage by focusing on ERST [11].

The modern visitors are more likely to base their decisions on prior encounters and memories. The modern traveler wants more than just pretty pictures, cheap trinkets, and a cozy bed. They want to engage with the places and the locals, and they seek for distinctive, real, and compelling experiences. They only buy the trip; it is the experience that they will remember. A memorable experience is said to provide a tourist with joy and enduring memories, especially if the tourism providers are effective in giving the visitors extraordinary memorable tourist experiences [12, 13]. Numerous studies in the field of psychology have shown that memorable experiences make people happier than material goods [14].

The constructed of memorable tourism experience conceptual model was scale-based instrument, and there were seven elements of memorable tourism experience included hedonism, engagement, knowledge, local culture meaningfulness, novelty, and refreshment [15]. This work has received a great deal of citation. An additional component dubbed “adverse feeling” has been introduced to the existing model [16], while [12] added a number of other factors, including surprise and tour guide performance.

Models will be used in the current study as a foundation to evaluate the impacts of ERST, and they will be modified slightly from earlier studies [17]. Following will be a discussion of the seven elements (hedonism, novelty, local culture, refreshment, meaningfulness, engagement, and knowledge) that are frequently employed in tourist literature:

Hedonism

The term “hedonism” comes from the Greek word “hedone”, which denotes enjoyment, amusement, or delight. Hedonism is the pursuit of physical pleasure and social interaction as a key motivation [18], and the 5S concept of sea, sand, sun, sex, and sangria has always been linked to hedonism [19]. The authors also connected hedonism to travelling and partying while looking for a certain nightlife style. Indeed, hedonism is an essential part of the tourism industry [20]. Since most tourists travel to find pleasure and happiness, tourism and leisure pursuits typically “devour” travelers in a hedonistic manner.

Novelty

Novelty is characterized by originality, novelty, and distinctiveness. In general, people frequently travel for various reasons, and novelty is a crucial aspect of the travel experience [21, 22]. From the standpoint of tourism, novelty is best described as a trip that offers an unfamiliar experience. Today’s tourists are increasingly interested in this new value and frequently choose the experience of novelty and strangeness. As a result, visitors prefer to travel to places with distinct cultures and lifestyles from their own [23], as well as in order to satisfy their yearning for something novel or different that they cannot find in their hometown [24]. Curiosity, which comprises sensory search, discoveries, learning, and experiences, is one of the factors that propels travelers to look for uniqueness around the world [25].

Local Culture

Tourists are increasingly participating in local activities, which gives them a unique opportunity to explore the local culture [26]. In reality, travelers are increasingly choosing to engage in a destination’s cultural traditions and languages rather than the usual gorgeous beaches and upscale resorts [27]. Additionally, travelers discover that “cookie-cutter” travel is less inspiring; as a result, they look forward to an ultimate authentic local experience in the area or country they are visiting. It is found that visitors who actively participated in the local culture throughout their stay were far more likely to remember and recollect their previous experiences [15]. Additionally, it has been suggested that interaction with locals enhances tourists’ extraordinary and unforgettable travel experiences [28].

Refreshment

When travelling, tourists frequently look for refreshments. Traveling, or making a trip from a familiar location to somewhere unusual, has created a state of vulnerability that is incredibly beneficial [29]; this releasing and revitalizing sensation is referred to as refreshment. Refreshment was described as a feeling of renewal and renewal that influences one's vacation recollections [15]. Refreshment is the sensation of intense experience involvement [30]. In reality, feeling renewed not only makes one feel good, but it also helps people feel calm and at ease inside.

Involvement

Tourist participation in each stage of the consumption process, including information seeking, service consumption, marketing, decision-making, and procurement, is referred to as involvement [31]. Participation is crucial for improving tourist places [32]. Therefore, engaging in travel experiences helps tourists remember, reflect on, and rediscover their previous experiences. Numerous researchers have determined that participation is essential for effective feelings and experiences [33], which enables visitors to recall their previous encounters and form new memories. In this aspect, travelers are more likely to recall and recover their prior travel experiences more effectively if they are more engaged in their holiday.

Meaningfulness

Tourists today are looking more and more for unique travel experiences that also fulfil their requirements and wishes [34]. Tourists seek significance in life because they believe that meaning is a key to happiness [35]. For instance, rather than only visiting new locations and meeting new people, some tourists perceive their travels as a voyage of personal development. The majority of visitors want an experience that enables them to pursue meaning and achieve substantial personal results, such as enhancing their personal and interpersonal development and enhancing family well-being [36].

Knowledge

Tourists today look for travel experiences that offer fresh learning opportunities, as well as opportunities to pick up new skills while travelling [37]. Visitors also look forward to participating in a variety of activities that allow them to particularly explore their skills and talents [38].

In accordance with this, tourists want to actively engage in local activities with the locals in order to learn new things and better understand the particular destination, such as its history, culture, and cuisine. They also want to listen to the tour guide's explanations and observe the surroundings. Additionally, learning opportunities are perceived as a singular, life-changing event that cannot be had anywhere else [36].

2.2 Tourist Satisfaction

A good reaction brought on by a favourable evaluation of the eating experience is known as satisfaction [39]. While overall satisfaction refers to the total amount of happiness with the consuming experience as a whole and a pleasurable condition of consumption that meets the needs of the consumer [40]. In other words, when expectations and experience

are compared, consumers will be satisfied if their satisfaction is met. According to the expectation-confirmation paradigm, satisfaction results from a performance that is evaluated as being better than or on par with what was anticipated [41].

While the expectation-confirmation theory has been extensively used in tourism literature to study tourist satisfaction, the disconfirmation model contends that satisfaction is actually more influenced by low expectations, and that visitors are more likely to be satisfied if their expectations are low. The disconfirmation model had been heavily criticised because there isn't concrete evidence to support the claim that visitors' low expectations do, in fact, have an impact on satisfaction [42]. There is a need to quantify satisfaction in the context of tourism on a worldwide scale because studies have shown that low expectations hardly ever result in satisfaction [43].

2.3 Relationship Between Experience-Rich Sustainable Tourism and Tourist Satisfaction

Travel experience and contentment are closely related. Numerous research on tourism have demonstrated the importance of the tourist experience in determining customer happiness [44, 45]. For instance, among wine tourists, it was discovered that a positive travel experience significantly influenced their pleasure and loyalty [46]. Additionally, it was discovered that elements like entertainment and beauty had a favorable impact on cruisers' pleasure [44]. Furthermore, based on the four characteristics of experience proposed by [9]—aesthetics, education, entertainment, and escapism—tourist experience does actually positively increase satisfaction, as demonstrated by [47].

Past scholars have additionally incorporated a number of experiential aspects that affect enjoyment in addition to these four dimensions of the realm experiences model [48–50]. For instance, the three experiential qualities of engagement, peace of mind, and educational experience were found to affect visitors' pleasure with Taiwanese heritage sites. It found that new, well-organized, and enjoyable tourist experiences have a favorable and significant influence on behavioral intentions through satisfaction in adventure tourism [50].

Propositions

Based on the previous empirical findings from primary studies, the paper propositions are as follow:

- Proposition 1. Hedonism will be positively related to tourist satisfaction
- Proposition 2. Novelty will be positively related to tourist satisfaction
- Proposition 3. Local culture will be positively related to tourist satisfaction
- Proposition 4. Refreshment will be positively related to tourist satisfaction
- Proposition 5. Meaningfulness will be positively related to tourist satisfaction
- Proposition 6. Involvement will be positively related to tourist satisfaction
- Proposition 7. Knowledge will be positively related to tourist satisfaction.

Conceptual Model

Based on the preceding discussion, a conceptual framework is proposed as shown in Fig. 1.

Experience-Rich Sustainable Tourism

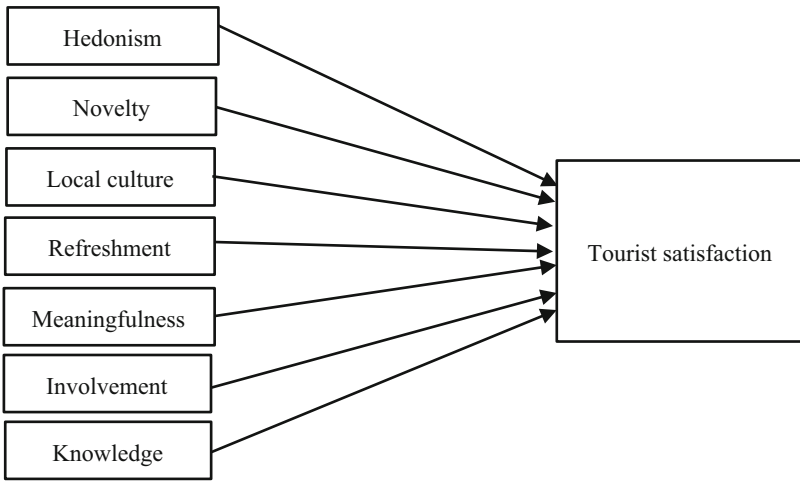


Fig. 1. Proposed conceptual framework of experience-rich sustainable tourism and tourist satisfaction.

3 Conclusion

The current study can assist tourism players in enhancing their marketing strategies to be heavily focused on destination experiential aspects rather than destination attributes. It can also help tourism suppliers improve their businesses in the competitive business environment and provide better insights into the notion of ERST among tourists. In addition, this research is very helpful for policymakers (LADA) in strategizing their planning, particularly in the recently released Langkawi economic blueprint (HELANG), which aims to increase the island’s tourism industry by showcasing its singularity through multi-experience travel. The current study makes a compelling case for broadening the setting to include a useful research contribution as prior study has never been done in such setting. In addition, this study also contributes to serves as a guideline for future study improvement, predominantly on the current subject matter and the applicability of the ERST scale to various tourism experiences and contexts. A proper experience-related marketing strategy is more critical than enhancing tourist satisfaction alone because this helps improve tourists’ future behavior.

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Assessment of Health and Safety Hazards Affecting Workers at Saline Water Conversion Corporation Lathe Workshop

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Abstract. Workplace safety is a crucial topic for all the factories in various industries. The workers in the Lathe workshops are always at risks of injuries due to the presence of various hazardous materials which could lead to fatal injuries for them. It is important for every company to carry out various risk assessments to develop a safety practice related to the operations performed by the workers. The focus of this research is to use analytical tools to identify safety hazards in a Lathe workshop located in SWCC facilities in Jeddah. The Fault Tree Analysis (FTA) approach identified various safety issues related to the worker activities and operations. A risk assessment is performed to find key solutions to the identified issues. At the end, the solutions are recommended to the Lathe workshop management in terms of improving its health and safety practice. The recommended solutions include the assessment of risks and their elimination, if possible, the implementation of 6s approach, the use of personal protective equipment (PPE) by the workers, the utilization of safety sign boards, implementation of lockout/tagout (LOTO) procedure and the development of the health, safety, and environment (HSE) department. The research is limited to the operations and activities performed by the Lathe workshop workers.

Keywords: Health hazards · Safety hazards · Water conversion · Lathe workshop

1 Introduction

The workplace hazards are always there in almost every manufacturing factory due to the presence of various factors including workplace falls, uncontrolled fires, heavy machinery, confined spaces, hazardous materials, and many more. In the field of the manufacturing of mixed flow vertical turbine pumps, employees and the external environment are always at risk if some specific safety regulations were not implemented properly. A huge number of studies and surveys have been conducted that found various kinds of injuries and health issues that were persistent in the lathe workshop that manufactures the vertical pumps. The main reason behind these small to severe injuries remained a lack of safety regulations. Short, D. B. et al. (2015).

There are 33 units assembled in the lathe workshop, including impeller, shaft pump, shaft line, packing, bowl discharge, gland, nut impeller, ring lantern, key impeller, bearing sleeve, coupling half driver, coupling half pump, key coupling, bell suction, bussing stuffing box, collar protecting, nut shaft adjustment, coupling shaft, ring thrust retainer, stuffing box, ring thrust split, pipe column, sole plate, guard coupling, fitting discharge, head surface discharge, retainer bearing line Shaft and a strainer. Mixed-flow vertical turbines are large vertical turbines used in municipal water supply, large-scale industrial applications, desalination applications, as well as flood control. Depending on the impeller design, mixed-flow impellers may be enclosed or open.

Enclosed-impeller mixed-flow turbines often have up to 3 or more stages and produce flows up to 30,000 GPM. Open mixed-flow impellers can be much larger – sometimes designed for flows in excess of 100,000 GPM but are usually limited to just a single stage (though two- stage designs are occasionally seen). Figure 1 below shows the assembly diagram. Vertical Turbine Pump Courtesy of the Hydraulic Institute, Parsippany NJ.

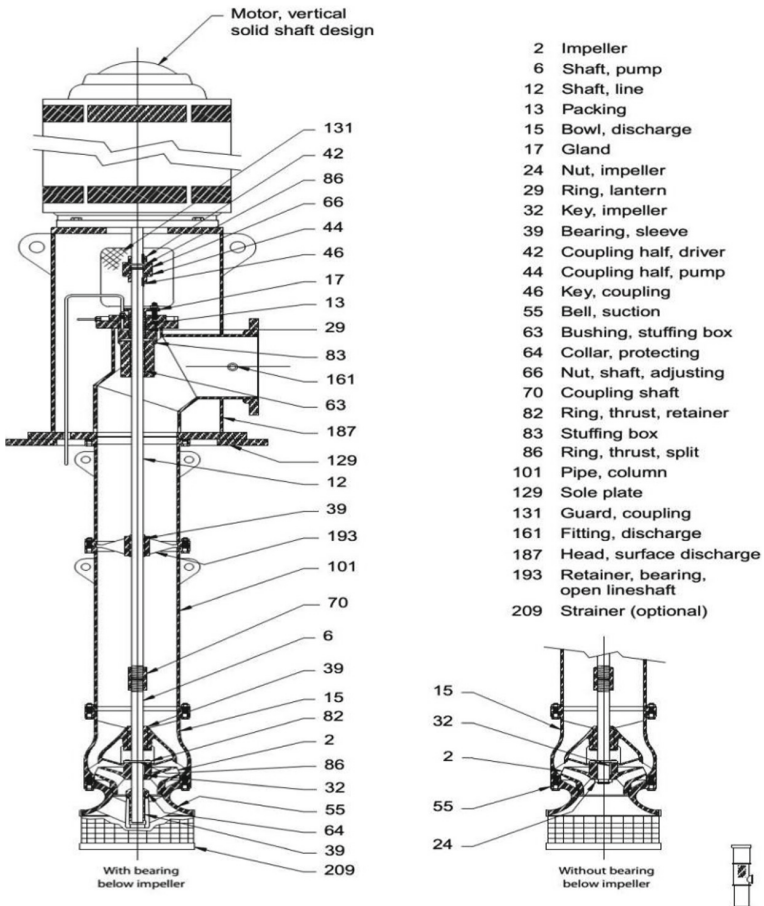


Fig. 1. CKD units of the vertical pumps Developed by SWCC

Cuts and falls and are the most common hazards faced by employees working in such types of factories. These issues lead a worker to hands or legs loss and other chronic effects. The management should play a role to ensure the implementation of safety rules and regulations at the workplaces. Safety in a lathe workshop is an important topic and it should be handled in proper manner to protect the workers.

1.1 Overview of Research Problem and Area

In this research, one of the study the authors work in a water desalination plant in Jeddah, Saudi Arabia. The purpose of the research is to identify safety hazards involved in the production and assembly process of the vertical pumps and apply various analytical tools to find a solution to improve the safety of the workers in the work. In this research, the focus is on the operations and activities performed by the workers.

The activities start by storing the raw materials. Raw materials represent completely knocked down units (CKD) representing steel sheets, bolts, flanges, paints, electrical controls, steel pipes, data wires, electric wires, meters, rotary motors, electric boards, fuses, beakers. Cutting, drilling, sharing, lathe and milling machines and painting shop is present. Figure 2 below illustrates SWCC Lathe workshop layout, number1.

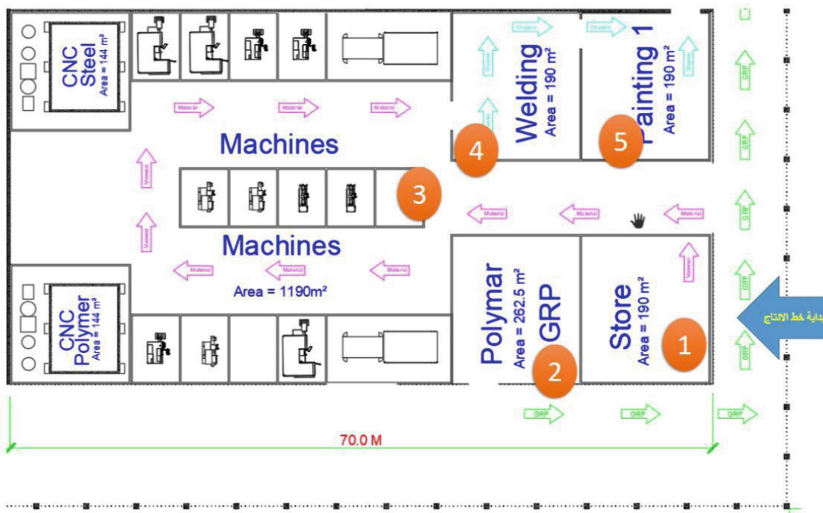


Fig. 2. SWCC lathe workshop layout number 1

Afterwards, the completely knocked down units are assembled. Figure 2 illustrates SWCC Lathe workshop layout, number2 (Fig. 3).

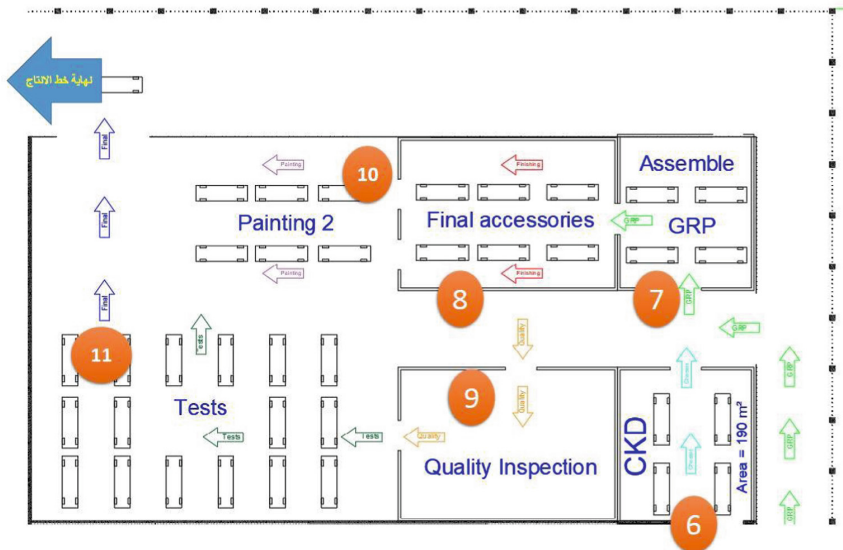


Fig. 3. SWCC lathe workshop number 2

The lathe workshop workers are always at a risk of various safety hazards due to the presence of various factors. The use of various practical and analytical tools can highlight safety issues associated with the operations and activities of the lathe workshop workers.

1.2 Project Aims and Objectives

The aims and objectives of this research project are:

- To identify the workplace hazards associated with the operations and activities of the SWCC lathe workshop for the manufacturing of mixed flow vertical turbine pumps and analyse them.
- To assess the risks related to various operations in the lathe workshop.
- To recommend various solutions to the found safety hazards and risks.

1.3 Project Significance

It is an important research dimension as it can provide aid to the lathe workshop and the workers to stay safe from various health and safety risks. The SWCC Lathe workshop specialised in the production of mixed flow vertical turbine pumps can improve its safety policy based on the recommendations of this study.

2 Occupational Safety and Health

Occupational safety and health (OSH) is concerned with the safety, health and welfare of people at work. It is a multi-disciplinary approach for developing and ensuring compliance with safe working practices, and maintaining the health and well-being of those employed in a particular occupation. Farlex. (Assessed on 19-March-2022).

It aims at enabling an individual to undertake their occupation, in the way that causes least harm to their health. Farlex. (Assessed on 19-March-2022).

2.1 Occupational Safety and Health Administration

Moving machine parts have the potential to cause severe workplace injuries, such as crushed fingers or hands or any other body part. It is essential to safeguard and protect workers from these preventable injuries. Any machine part, function, or process that may cause injury must be safeguarded. Machine Guarding - Overview | Occupational Safety and Health Administration.

To ensure chemical safety in the workplace, information about the identities and hazards of the chemicals must be available and understandable to workers in the workshop. Hazard Communication - Overview | Occupational Safety and Health Administration. (Assessed on 19- March-2022).

2.2 Hazards and their Risk for People Working in Lathe Industry

Health hazards from welding, cutting, and brazing operations include exposures to metal fumes and to ultraviolet (UV) radiation. Safety hazards from these operations include burns, eye damage, electrical shock, cuts, and crushed toes and fingers. Many of these can be controlled with proper work practices and personal protective equipment (PPE). Welding, Cutting, and Brazing - Hazards and Solutions | Occupational Safety and Health Administration. (Assessed on 19-March-2022).

Spray operations can present both physical and health hazards to those involved. This may include such diverse activities as the application of flammable and combustible liquids, such as paint, in a spray booth or spray area, electrostatic coating operations, and automobile body lining operations. Spray Operations - Overview | Occupational Safety and Health Administration. (Assessed on 19- March-2022).

Chemical hazards and toxic substances pose a wide range of health hazards (such as irritation, sensitization, and carcinogenicity) and physical hazards (such as flammability, corrosion, and explosibility). Chemical Hazards and Toxic Substances - Overview | Occupational Safety and Health Administration. (Assessed on 19-March-2022).

2.3 FTA and Risk Assessment

The most suitable process for hazard identification is using the Fault Tree Analysis (FTA). Jafarian and Rezvani (2012). This includes decomposing the problems and identifying the worst possible failures that may occur. With the use of FTA, one can identify the possible failures of systems, processes, and human. Once the possible failures are identified using the FTA, a risk assessment will be executed for the identified task to analyse

the hazards and identify the control measures to reduce the current risk and derive for a final risk. The risk will be ranked in a risk assessment using the Consequence/Severity vs. the Likelihood/probability. Consequence of a risk assessment is the analysis of how worse/severe the situation or the failure could be, as an example how serious the injury could be (Serious Fractures/Permanent Disabilities/Fatal injuries or multiple fatalities). The probability/likelihood of a risk assessment is the analysis of how often/quickly the failure could result in. Once the residual risk is identified, control measures need to be identified to reduce the severity and the likelihood of the risk.

The hierarchy of controls are described as below:

- 1- Elimination: this removes the risks, i.e., the risk of explosion due to the storing of heavy fuel oil to generate electricity. The elimination involves the supply of electricity from the grid instead of using the electrical generator.
- 2- Substitution and reduction: This involves the replacement of the option with a less hazardous option, i.e., replacing the fuel type to a less flammable fuel.
- 3- Engineering controls: This involves the application of engineering methods to limit the hazard, i.e., surrounding the electric generator with a boundary wall to reduce noise and hearing loss. A good example for that is using Lock out/tag out (LOTO) or interlocks to keep workers safe from the different machine's risks.
- 4- Administrative controls: this includes all managerial activities that instruct the workers to avoid the workplace hazards, this includes safety sign boards. By means guiding and training the workers to work in a safe environment, for example using safety sign boards and training the workers to follow the safety rules.
- 5- Personal Protective Equipment (PPE) including all wearable's that may protect the worker from the hazard. Employees wearing protective equipment such as gloves, helmets, safety shoes, ear plugs, among others, will help them avoid the hazard from the job they perform (Fig. 4).



Fig. 4. Hierarchy of risk control

This project steps are as below:

- 1- Identify the hazards at the case SWCC Lathe workshop: this step identifies the hazards by identifying the jobs made in Case SWCC lathe workshop Facilities. Namely, cutting steel, bending steel, Painting Works and welding works and the assembly works.
- 2- Assess the risks; this includes Fault tree analysis by quantifying the probabilities of each scenario, Risk assessment by evaluating the probability of the risk to happen and the severity of that risk if happened. Trying to suggest some practical control measures.
- 3- Apply Practical control measures such as 6S’ technique of lean management, Personal protective equipment’s and sign boards.
- 4- Review and feedback.

Hazard Analysis

Hazard analysis involves the identifying any one activity that may lead to harm. The commitment towards safety is due to ethical, financial, and legal requirements. In Islam the humans are appreciated and is glorified in comparison to other creatures. Thus, this could be an additional factor that may lead to empower safety. To identify safety fault tree analysis has been used, risk assessment in this chapter. While the next section highlights some site observations and tries to mitigate it (Fig. 5).

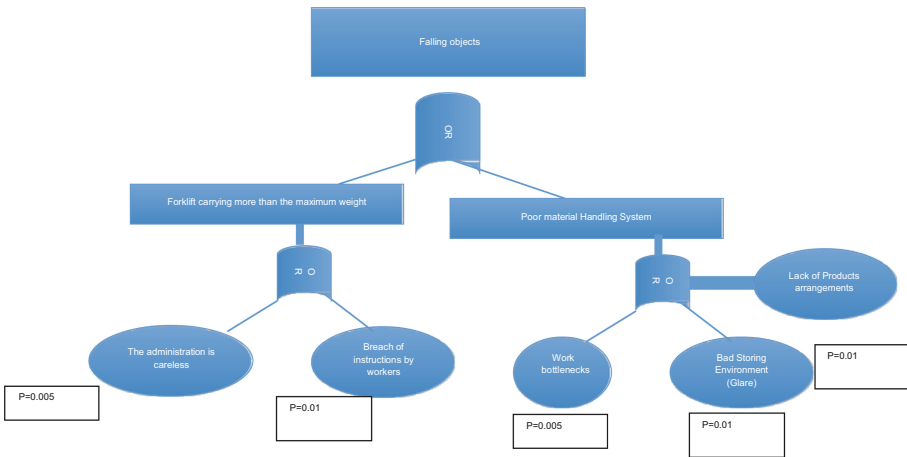


Fig. 5. FTA for Product Falling or Damaged The Probability of failure = P (Forklift carrying more than the maximum weight) + P (poor material handling system) = (0.005 + 0.01) + (0.005 + 0.01 + 0.01) = 0.04.

3 Risk Assessment

A risk assessment was performed to evaluate the unsafe working conditions at for the SWCC Lathe workshop. The following risk matrix was used to compute the risk of the identified hazards for various activities (Tables 1 and 2):

Table 1. Risk matrix legend

Likelihood	Severity
Rating 1: very unlikely	Rating 1: No injury or illness
Rating 2: unlikely	Rating 2: First aid injury or illness
Rating 3: Likely	Rating 3: Minor injury or illness
Rating 4: Very likely	Rating 4: Major injury or illness
Rating 5: Almost certain	Rating 5: Disability, fatality

Table 2. Risk matrix

RISK MATRIX							
Occurrence/Likelihood	5	Almost certain	5	10	15	20	25
	4	Likely to occur	4	8	12	16	20
	3	Possible to	3	6	9	12	15
	2	Unlikely to	2	4	6	8	10
	1	Rare / Remote	1	2	3	4	5
			Low/ Insignificant	Minor Impact	Moderate/ High	Major/ Very High	Extreme Impact
Impact/ Severity			1	2	3	4	5

The likelihood of happening is seldom due to small numbers of operations involved in the AMI facilities. (Prototyping works and no mass production). Thus, it shall be reviewed in the future (Table 3).

Table 3. Risk assessment for the SWCC lathe workshop

ACTIVITIES/HAZARDS	Sub Task	Risk / Hazard	Affected Personnel	S	L	Risk	Risk Mitigation Controls
Physical	Loading and unloading of the material using the forklift	Employees working under suspended loads could lead for dropped objects into employees. This could lead for Serious injuries or fatalities.	Assigned operatives and other workers in the work area	4	1	4	<ul style="list-style-type: none"> - Eliminate the working situations under the suspended load. - Development of the work procedures and communicating with the employees on the safe means of work process. SOP development and awareness. - Area isolation in the process of jumbo bags loading and unloading. Employees' movement are restricted. - Checking the weight of the load that the forklift is carrying.
		Forklift carrying more than the maximum allowable weight could lead forklift tipping over.	Assigned operatives and other workers in the work area	5	1	5	
Physical	Movement of the forklift in the area- From point A to B	Employees colliding with the moving forklift.	Assigned operatives and other workers in the work area	4	1	4	<ul style="list-style-type: none"> - Eliminate this hazard if possible - Forklift equipped with proximity sensors, reverse cameras, and beacons. - Forklift pathway segregated (line markings being displayed), where employees are not allowed to use. - Employees being provided with reflective jackets and safety shoes. - Uneven floors and potential tip over areas to be constructed. - Providing awareness and training to the forklift operator on the safe procedures. - Horn and reverse alarm
		Forklifts colliding with each other.	Assigned operatives and other workers in the work area	4	1	4	
		Forklift tip over (from the uneven floor) or run over on an employee's resulting into serious injuries.	Assigned operatives and other workers in the work area	5	1	5	
		Forklift hits an object due to unqualified driver.	Assigned operatives and other workers in the work area	3	2	6	
	Operating the machine: steel tube cutter, bender, sander, pressing for mold sheets	Employees exposed to rotating parts of the machine – hands being crushed and fractured.		5	1	5	
		Drinks and worker's bags placed on the machine which could lead to machine damage.	Assigned operatives and other workers in the work area	3	1	3	

(continued)

Table 3. (continued)

Physical	Clearing the jams of the machine by the operator.	Sudden machine start-ups while clearing the jams of the machine. Resulting into serious injuries by getting caught into moving parts.	Assigned operatives and other workers in the work area	5	1	5	<ul style="list-style-type: none"> Eliminate this hazard if possible Lockout Tag out being followed prior to cleaning machine jams. Installation of emergency switch to the machine. Training to employees on the LOTO process. Display of the warning sign boards. Fixed guards and gates
Physical	storing of the final products and subassembly units and automotive parts	Repetitive motion and excessive loads could result in musculoskeletal disorders.	Assigned operatives and other workers in the work area	3	2	6	<ul style="list-style-type: none"> Eliminate this hazard if possible Installation of an automatic palletiser for the process. Ergonomic training for the employees involved in the task.
		Products falling or damaged due to the poor handling of products	Assigned operatives and other workers in the work area	2	2	4	<ul style="list-style-type: none"> Following an effective material handling system to move the products. Gantry crane
Physical	Electrical Hazards	Overheating of cables may cause fire	Assigned operatives and other workers in the work area	5	1	5	<ul style="list-style-type: none"> Eliminate this hazard if possible Don't overload electrical sockets, connectors
		Cuts of wires causing electrical shocks	Assigned operatives and other workers in the work area	5	1	5	<ul style="list-style-type: none"> PAT test for all appliances
Physical	Welding	Workers breathing harmful fumes	Assigned operatives and other workers in the work area	5	3	15	<ul style="list-style-type: none"> Eliminate this hazard if possible, by sending welding to another workshop Installing Local Exhaust Ventilation system to extract harmful fumes Ensure LEV system is good enough to take harmful fumes out of the workshop Train workers on how to check LEV system to avoid any failures in the system.
		Explosion of Cylinder	Assigned operatives and other workers in the work area	5	3	15	<ul style="list-style-type: none"> Proper meter reading Cylinder housing Earthing of cylinders
		Risk of workers having eye injury	Assigned operatives and other workers in the work area	4	3	12	<ul style="list-style-type: none"> Send workers who have any health symptoms immediately to clinic to assess their health. Use eye Goggles Supervision of employees
		Fire	Assigned operatives and other workers in the work	4	3	12	<ul style="list-style-type: none"> Fire Blanket Powder Fire Extinguishers Sprinklers Detectors

(continued)

Table 3. (continued)

Physical	Mechanical Hazards	Ejected parts	Assigned operatives and other workers in the work area	4	1	4	<ul style="list-style-type: none"> • Proper machine/tools guarding • PPE: Goggles, Face Shield,
Fire, physical, chemical	adiation	Cancer and Eye Blend	Assigned operatives and other workers in the work area	4	1	4	<ul style="list-style-type: none"> • Eliminate this hazard if possible • Permits • PPE
Chemical, fire	Fire	Fatalities and material loss	Assigned operatives and other workers in the work area	4	1	4	<ul style="list-style-type: none"> • Eliminate this hazard if possible • Proper PPE • Fire Detectors • Firefighting system • Extinguishers • Sprinklers • Fire alarm
Chemical, fire	Confined Space	Lack of oxygen; Presence of explosive agents, Fire Explosion, Asphyxiation, Slip & Trip & Fall Inhalation of the dust causes asphyxiation/cancer, poor illumination, presences of snake.	Assigned operatives and supervisor.	4	1	4	<ul style="list-style-type: none"> • Eliminate this hazard if possible • Maintaining Log Sheet prior to entry of the personnel; • Gas monitoring shall be conducted by competent person prior to the start of the work, results to be displayed and recorded. • Supervisor is responsible to control confined space entry. • Air blower shall be placed and functioning from one end for air circulation. • Protective clothing along with heat resistant hand gloves shall be worn by the task performers throughout the task. • Provided confined space TBT to workers prior to work. • All electrical connection connected on the space shall be properly isolated to avoid sudden release of energy. Low voltage lighting shall be used. • Provide Proper illumination.
Environment	Noise	Hearing Loss	Assigned operatives and other workers in the work area and visitors	4	1	4	<ul style="list-style-type: none"> • Eliminate this hazard if possible • Use low sound equipment. • Periodic inspection should be done and maintain colour coding system. • Suitable/mandatory P.P.E to be used such as ear plugs, <p>hard hat, gloves, face shield, shoe with steel toe, dust mask, high visible vest.</p>

(continued)

Table 3. (continued)

							<ul style="list-style-type: none"> • Signage to be posted at high noise area to use mandatory P.P.E like ear plug.
Environment	environmental hazard	Hazards Material, Dust emission	Assigned operatives and other workers in the work area	4	1	4	<ul style="list-style-type: none"> • Collect all waste from work area and keep in a skip. • Disposal must be carried out as per local rules and regulations of hazard waste disposal. • Use appropriate PPE Air supply hood
Physical, chemical,	Tube cutting, bending and installation	Fire hazard, Back Pain/Muscular Stress, Crush injuries of hands and feet, unprotected rebar, personal injury due to falls and impact of falling objects, fall from height.	Assigned operatives and other workers in the work area and visitors	4	1	4	<ul style="list-style-type: none"> • Eliminate this hazard if possible • Suitable/mandatory P.P.E to be used such as hard hat, gloves, glass, shoe with steel toe, dust mask, high visible vest. • Cutting area should be free from fire hazard. • Competent person should carry out the activity. • Cutting area should be away from workplace. • Cutting area should be isolated. • Bend the knees to reach the bottom of the load to get a grip, do not bend the spine. • Lift the load slowly by gradually straightening the legs. • Carry the load close to your body and at safe height. • Remove unwanted material that may cause slip and trip hazard. • Ensure all tool and equipment are in good condition prior to work. • Colour code in place. • Ensure all guards in place for power tools. • Housekeeping to be maintain on daily basis. • Fire point to be place near workshop. • Adequate fire extinguisher in place.
Environment	Traffic	Vehicle incident, impact of vehicle to moving person around	Assigned operatives and other workers in the work area.	4	1	4	<ul style="list-style-type: none"> • Eliminate this hazard if possible • Always observe the speed limit and traffic rules be alert while driving. • Provide proper signage and blinking lights to avoid accident and flag man must be provided.
Environment, physiological	Housekeeping	Person injury, Slip, Trip or fall	Assigned operatives and other workers in the work area	4	1	4	<ul style="list-style-type: none"> • Eliminate this hazard if possible • All Material to be loaded and unloaded are to be placed into designated area only. • Good housekeeping shall be maintained in regular basis.

4 Conclusion and Future Research

It is important for every Lathe workshop to take health and safety of the employees seriously to improve their safety practice and production. Safety hazards can be found by using various risk assessments and analytical tools. The participation of employees and company leadership in these risk assessments is highly important. In this research, Lathe workshop which the author works in (SWCC) was introduced to find various safety hazards related to the operations and activities performed by the workers. A Fault Tree Analysis (FTA) is used to identify safety hazards and find the worst-case scenario. On the basis of key findings, the safety hazards are analysed to find the solutions. The main aim of the research is to provide solutions to the workshop in terms of improving its safety practice. The recommended solutions will help the workshop management to amend its current safety practice to an improved version to comply with safety policy at SWCC. The solutions recommended by this research to the Lathe workshop include the assessment of risks and elimination if possible, and the use of 6s approach, use of PPE by the workers, implementation of sign boards where required, implementation of LOTO procedure, and the development of an onsite HSE department. This research is limited to the safety hazards associated with the operations and activities performed by the workers. There is a room for further research to identify risks associated with the overall safety of the Lathe workshop and find efficient solutions to those risks. Moreover, the research was focused only on the SWCC Lathe workshop based in Jeddah. The research should be conducted in other manufacturing industries factors as well to improve their health and safety practices.

The research should be conducted in other industries factories as well to improve their safety policies.


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Work Habits Based on Agile Methodology: Metrics and Procedures

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Abstract. Organizations use agile management frameworks (e.g., Scrum) to facilitate continuous change. Agile work practices (AWPs) aren't well-defined or assessed. This research uses the task work-teamwork distinction to construct a novel theoretical framework and AWP measuring tool. We detail AWP's temporal, management, team, and job design methods. Based on this approach, we verify agile techniques using data from 269 teams ($n = 1664$ observations). AWP's depart from centralized bureaucracy and converge with spontaneous team planning, autonomy, and feedback. The nomological network's changeable linkages facilitate task work-teamwork. Multilevel regression studies show that AWP's lead to better team planning and task design. This study broadens agility research by separating AWP management frameworks.

Keywords: Agile work practices · Scalability · Team procedures · Work design · Bureaucracy · Agility · Agile work methods · Agile teams

1 Introduction

Complex settings need dynamic organization (Brown and Eisenhardt 1997). Agile governance Software engineering frameworks. (Beck et al. 2001). Annsi. Imaginary marketing team This agile team creates advertisements in four-week sprints (Sutherland 2014). (Van Oorschot 2018). Each sprint, the team tests a new advertising feature e.g., A/B testing (Ghosh 2021). Agile development adjusts the campaign to changing demands and examines end-user expectations (Grass et al. 2020).

Agile research is lacking (Niederman et al. 2018). Organizational psychologists have argued for a “psychometric validation study” (Rietze and Zacher 2022). Be accurate while measuring. Team-based agile practices (Junker et al. 2021) Agile work practices are reviewed from organizational, work team, and work design literature (Pentland 2003). We focus on practices that have been extensively used (Tripp and Armstrong 2018), allow continual growth (Brown 1997), and can be assessed using the task work-teamwork continuum (Crawford 2013).

Agile employs sprints and iterative methodologies (Wu 2021). Iterative development tests and enhances product elements in cycles. Agile collaboration incorporates regular “stand-up” meetings to monitor goals and longer after-action-reviews to improve team

reflexivity (Stray et al. 2020). Goal-tracking and reflection promote agile task work. Agile task work and agile teamwork are unique. AWP are commonly utilized (Tripp 2018).

IT researchers lead agile research (Hoda 2017). AWPI may promote agile working among academics. Management academics have employed agile team environments to investigate prioritizing, group pressure, and peer responses to proactive behavior (Twemlow et al. 2022). AWPI should boost research agility.

2 Theoretical Background

2.1 Origins of Agile Working

Agile derives from the agile manifesto, released about 2000 (Beck 2001). Agile manifesto rejects Waterfall. Waterfall emphasized long-term goals, which didn't match the software business (Maruping 2009). Agile manifesto proponents favored light planning and self-managing teams e.g., customer preferences. Scrum (Sutherland 2014) and Kanban certifications followed Agile manifesto (Anderson 2010). Agile techniques help teams adopt the agile manifesto. Agile practices follow the manifesto. This idea guides agile functioning Disparities in management ideas, practices, and behavior were discovered in the 1990s (Dean 1994) and in lean development studies (Niepce and Molleman 1998). Agile methodologies integrate NPD and software development (Khanagha et al. 2022) AWP are oversized.

2.2 Conceptualizing Agile Work Practices (AWPs) for Organizational Research

Without Scrum or Kanban, agile (Anderson 2010). Agile outperforms NPD (AWPs; Junker et al. 2021). Change-oriented AWP Routines are routines (Pentland 2003). Agile teamwork i.e., facilitating change-oriented action.

(Schreyögg 2016) AWP are dynamic and interconnected. Agile assessment and shorter goal cycles are needed for iterative development (Ghosh 2021). Agile teams produce prescriptions, procedures, or methods. AWP doesn't hire or write. Plan quickly.

AWP provide teams control and stability (Gersick 1990), but its structure may stimulate change and flexibility. AWP combine macro and micro study (Adler 2021) AWP and change (see, Table 1).

2.3 AWP Promote Change

Compare AWP's routines and change studies (1997). Organizational practices that address the past, present and future (Brown and Eisenhardt 1997). Four AWP reset Sprints Agile sprinting (Van 2018), Prioritizing short-term improvements. Successful firms reduced planning schedules to fit conditions, System entrainment (Ancona et al. 2001). (Flexes) Agile teams speed up. Agile prioritization is needed for changing client needs and resource restrictions (Blagoev 2021). Sprints engage teams because members may better coordinate behavior while pursuing objectives (Nahrgang et al. 2013). Sprints evolve.

Development Iterative: Agile teams approach objectives iteratively (Tripp et al. 2016). MVP develops agile apps (Lee 2021). We user-tested this prototype for feedback, then modified features and ran low-cost trials. Requests drive iterative development. Iterative development allows cheap future discovery (Eisenhardt 1997, p. 25). Loss without software iteratively develops and implements (e.g., unsuccessful product prototypes). Iterative (Kirchherr 2019).

Stand-ups Daily “standups” for Scrum teams. Stand-ups address operations and obstacles (Hummel et al. 2015). Goals drive stand-ups (Rapp et al. 2014). Tasks, priorities, and communication are clarified (Brown and Eisenhardt 1997, p. 15). This formal framework may help teams learn (Stray et al. 2020).

Table 1. Agile work methods conceptualised.

Possible processes hidden under the surface

- Agile methodologies Timeliness Directorship Collaboration Sprints Entrainment Concrete control, not abstract Planning for emergent tasks Loading vertically (e.g., autonomy)
- Iterative design
- What’s next? bureaucratization
- Standing-room-only
- Present-focused
- Planned teamwork
- Channel feedback Retrospectives History lessons

Interconnectedness: The four AWP’s create temporal future, present, and past linkages retrospective meetings Encourages task-teamwork (Marks et al. 2001). Task work and social-emotional requirements (Tuckman 1965). Validating second-order factor structure is needed to combine AWP with task work-teamwork theories (Marks et al. 2001).

Teams set goals, distribute responsibilities (LePine 2013). Agile uses short-cycle objectives. Agile teams accomplish objectives via sprints and iterative development (McGrath et al. 2000). Prioritize AWP tasks. Teamwork assigns jobs (Crawford 2013; Fisher 2014). Agile teams handle emotions in stand-ups and retrospectives (Bales 1950; Tuckman, 1965). Teamwork improves through stand-ups and retrospectives.

Agile Teamwork: Agile meeting frequency depends on sprint length CAS-AWP teams provide an adaptive social framework. As customers seek quicker product development, sprint cycles may be shorter, stand-up meetings may replace retrospectives, and iterative development may focus on existing prototypes over new ideas. Four AWP’s need internal/external teams e.g., customers, technology, other teams, and so forth.

AWP’s include task-teamwork. Agile task work influences design and planning. AWP doesn’t contradict task work-teamwork (Ishak 2012). Complex, limited team roles. Clustering lets teams collaborate on similar activities (Arrow 2000).

Hypothesis 1: AWPI monitors sprints, iterative development, stand-ups, and retrospectives.

Hypothesis 2: Agile involves task work, sprints, iterative development and cooperation.

AWP Implementation Contexts: Large-scale changes have employed AWP for a decade (Rigby et al. 2020) and technology have seen changes Analyze the direction and intensity of nomological network linkages between teams to see whether AWP's effects are setting-independent. Below are empirical questions.

RQ1: Mean AWP differ across team types and agile transformation stages.

RQ2: AWP and nomological network variables vary across team types and agile transformation stages.

3 Methods

3.1 Overview of the Data Sources

Table 2 displays Agile demographics e.g., LinkedIn and personal contacts, IT-logistic. AgileOrg delivery IT, consulting, maintenance and support develop products. AgileOrg gives team size, type, and role.

3.2 Overview of the Validation Approach

Three AWPI phases (DeVellis 2016) A and B samples establish AWPI's factor structure, internal consistency, and measurement invariance (Hypothesis 1 and 2). Agile team types and phases compare AWP.

Table 2. Sample and participant characteristics

Category	Items
Sample	Convenience
Team size	Not applicable
Employees	187
Teams	Not applicable
Team response	Not applicable
Demographics	Mostly women (66%), aged 35–55 (50%), with bachelor's degrees (78%). Most respondents were native German speakers; 36 answered in English
Work content	Logistics (16%), IT (14%), building (10%)
Team experience	71% of the participants were long-term team members
Agile transformation	39% said their team was agile or very agile

Table 3. Agile team sample and member traits

Category	Items
Sample	Agile teams
Team size	M = 9.51, SD = 2.41
Employees	482
Teams	117
Team response	Min. = 2, Max. = 9, Median = 41% per team
Demographics	79% men, 54% aged 35–55, 62% with bachelor's degrees
Work content	462/114 delivery/support crews
Team experience	93% of team members had over 7 months
Agile transformation	43% were agile

Table 4. Overview of agile org longitudinal sample and participant characteristic

Category	Items
Sample	Agile Org longitudinal
Team size	M = 12.21 SD = 2.11
Employees	312
Teams	73
Team response	Min. = 2, Max. = 9, Median = 42%
Demographics	Mostly males (61%), aged 35–55 (51%), with a bachelor's degree (76%)
Work content	261 delivery teams; 52 support teams
Team experience	97% of participants have been on their team for over 6 months
Agile transformation	74% of teams were agile-transformed

3.3 Validity and Dependability

Analytical Reasoning: First, build a pool of diverse ideas (Hinkin 1995). Before building AWPI, we interviewed five German agile practitioners two members of an agile team, two HR experts, and one agile coach. Agile in diverse team settings Software vs. others Software development-specific scales adapted to findings (So 2010; Tripp et al. 2016). Interviews helped us create AWP-inspired art. Interviewees and two organizational psychology specialists with scale development expertise examined 41 questions (one associate and one full professor). Eight entries were non-AWP. Here is the test and item pool analyses (see, Table 6).

Table 5. Sample and characteristics of agile new teams

Category	Items
Sample	AgileOrg new teams
Team size	M = 11.55 SD = 2.52
Employees	658
Teams	165
Team response	Min. = 2, Max. = 11, Median = 42% per team
Demographics	Mostly males (66%), aged 35 to 55 (47%), with bachelor's degrees (66%)
Work content	422 delivery teams; 137 support teams
Team experience	89% of participants have been on their team for over 6 months
Agile transformation	47% of the teams were agile

4 Exploratory Factor Analyses

EFA reduced Sample A's item pool. Despite our small sample size (163 employees), we can factor analyse our data (see also, Fabrigar et al. 1999). Four latent factors explained about half the difference between experiments. Parallel analysis finds large eigenvalues, unlike other retention methods (Hayton et al. 2004). Oblique EFAs for four-factor loadings. Seven items had cross-loadings $> .25$ or non-hypothesized. EFA was "clean" after these deletions (DeVellis 2016). RMSEA of .064 (90% CI [.053; .076]) indicates strong model fit. (2004). Table 6 shows sample A items and factor loadings, validating Hypothesis 1. English-speaking sample A (Table 2). Excluding them yielded similar factor structure and model fit (RMSEA = .063).

Agile Methodologies, Team Kinds, and Task Dependencies: Participants in Sample A's survey rated their team as conventional, agile, consultant, project/time-limited, or management. Scrum, Kanban, XP, Lean, and Waterfall were addressed (Maruping et al. 2009; Venkatesh et al. 2020). Our new AWPI measures correlated with participants' assessments of team agility ($r = .41$ to $r = .50$), agile practises ($r = .21$ to $r = .52$), and frameworks ($r = .22$ to $r = .44$). Iterative development and stand-up meetings complemented waterfall development. Growth iteratively encourages collaboration. Agile teamwork and practises are valid. AWP's aren't agile, team, or task-based. Agile uses iterative development and stand-ups (Ghosh and Wu 2021).

4.1 Multilevel Confirmatory Factor Analyses

Structured factors (Table 8). Marsh et al. (2004) recommend CFI and TLI. 08, RMSEA, SRMR. Comparing the original ML-CFA (Model 3 in Table 8) with the between-team CFA (Model 2), we found items with inadequate between-team factor loadings, which may affect model fit indices (e.g., SRMR; Asparouhov and Muthén 2018). AWPI maintained only high-loading between-team goods. Retained items exhibited high factor loadings (mean = .86, range = .56–.96). Valid construct (Bliese et al. 2019).

Table 6. Sample A APWI items and loadings

Item	Factor loading	1	2	3	4
ID1	Before growing, we create a prototype/pilot				.54
ID2	We try numerous approaches before deciding				.61
ID3	We tweak our ideas				.62
ID4	Our approach is flexible				.57
ID5	We constantly request feedback from customers/clients				.62
ID6	We assess whether consumer expectations have changed often				.75
ID7	We don't always know the ultimate product when we start a task				.58
S11	We sequence our work			.63	
S12	Our work cycles are under 1 month			.72	
S13	Short work cycles decrease uncertainty			.82	
S14	Short work cycles promote flexibility			.73	
S15	Short task cycles are used (e.g., weekly)			.63	
DS1	We meet briefly to review task updates	.86			
DS2	We hold a brief meeting to address task-related obstacles	.83			
DS3	We meet briefly to review our progress	.87			
DS4	We meet briefly to address task problems	.91			
DS5	We meet briefly to discuss our job	.82			
DS6	We meet briefly to discuss important problems	.83			
DS7	Our brief meeting discusses task modifications	.91			
RR1	We complement each other's work		.71		
RR2	We discuss team successes		.91		
RR3	We discuss work practices thoroughly		.71		
RR4	We critique our work		.78		
RR5	We work on team dynamics		.77		
RR6	We examine team performance in depth		.62		
RR7	We consider consumer input		.52		.23

4.2 Internal Consistency, Test-Retest Reliability, and Cross-Lagged Relationships

As shown in Table 9, both the long and revised AWPI scales have adequate Cronbach's alpha (assuming strictly parallel items) and McDonald's omega hierarchical internal consistency reliability (assuming congeneric items). Acceptable ICC2 values demonstrate that sampling more responses per team won't affect group means (Bliese et al. 2018). High levels of within-team agreement (rwgj) show the AWPI represents a common team construct. Teams had one-year test-retest reliability (i.e., Sample C). Agile teaming is less trustworthy than agile task work, test-retest correlations show (see, Table 9). Agile

Table 7. Sample A PPM correlations.

	NMSD			1	2	3	4	5	6	7	8	9	10	11 12 14 15 16
1. Iterative development	163	3.50	0.76											
2. Sprints	163	3.24	0.94	.51**										
3. Stand-up meetings	163	3.20	1.09	.39**	.50**									
4. Retrospective meetings	163	2.78	0.96	.31**	.34**	.49**								
5. Agile team	150	3.16	1.22	.50**	.49**	.41**	.43**							
6. Scrum	150	2.95	2.17	.34**	.52**	.45**	.37**	.62**						
7. Kanban	150	3.01	2.03	.26**	.25**	.25**	.21**	.37**	.45**					
8. Extreme Programming	150	1.65	1.30	.21**	.28**	.23**	.23**	.40**	.42**	.29**				
9. Design Thinking	150	2.67	1.85	.44**	.22**	.23**	.23**	.39**	.26**	.36**	.38**			
10. Lean Development	150	2.30	1.71	.38**	.28**	.25**	.23**	.42**	.34**	.31**	.53**	.51**		
11. Waterfall Development	150	2.09	1.54	.24**	.09	.18*	.07	.26**	.26**	.13	.37**	.29**	.42**	
12. Task interdependence	163	3.74	0.78	.21**	.15	.15	.04	.05	-.07	.06	-.13	.01	-.03	.10
14. Service/production team	163	0.31	0.47	-.03	.15	.10	.09	.08	.08	.04	.08	-.07	.06	-.04 - .09
15. Consulting team	163	0.28	0.45	.00	-.10	-.12	-.10	-.02	-.03	-.01	.04	.14	.05	.04 - .11 - .36**
16. Project (time-limited) team	163	0.37	0.48	.18*	.10	.09	-.01	.09	.03	-.03	.07	.06	.08	.09,18* - .49** - .31**
17. Management team	163	0.12	0.33	-.08	-.12	-.04	.04	-.08	-.06	.00	-.13	-.08	-.05	-.04,05 - .25** - .19* - .13

Note. Variables 14 to 17 are coded in a binary way (0 = no, 1 = yes), N = sample size, M = mean, SD = standard deviation, ** p < .01, * p < .05

cooperation at T1 connected with agile task work at T2, but not vice versa ($\beta = .02$, SE = .08, $p = .857$).

MI checks higher-order factor stability. Individual-level data enhances psychometric tests' power and sample-size-per-parameter ratio (Marsh et al. 2004; Molenaar 2016). In Phase 1, multilevel CFAs achieved cross-level isomorphism (see Tay et al. 2014).

Subgroup analysis (4 items) Note's measurements. Table 6 compares versions' parts. C was used for test-retest reliability, B for all other results. Agile predicts task changes (changes in terms of rank-ordering; Henk and Castro-Schilo, 2016). Agile task-work and teamwork differ (Kenny 1975).

Table 8. Sample B confirmatory factor fit.

Model	N	df	AIC	BIC	$\Delta\chi^2$	CFI	TLI	RMSEA	SRMR
1. Within-team	476	293	30,553	30,903	859.23***	.875	.861	.064	.054
2. Between-team	114	293	5784	6014	631.16***	.874	.861	.101	.091
3. Multilevel	476	586	32,374	32,952	1010.93***	.924	.916	.041	w = .061; b = .149
4. Rev. Within-team	476	98	19,198	19,423	218.19***	.953	.942	.051	.047
5. Rev. Between-team	114	98	3537	3685	156.69***	.963	.955	.072	.072
6. Rev. Multilevel	476	196	20,760	21,137	260.14**	.981	.977	.027	w = .050; b = .079

Note. *** $p < .001$, ** $p < .01$. Rev. = Only elements with large between-team factor loadings were retained (from Model 4 onward)

Table 9. Internal consistency, group mean stability, and median within-team agreement

	Reliability	α	ω_h	ICC ₂	r_{wgi}	$rt + 1year$
Scale	Agile taskwork long (12 items)	.91	.83	.80	.95	
	Agile taskwork (8 items)	.90	.83	.79	.94	.72
	Agile teamwork long (14 items)	.94	.87	.79	.98	
	Agile teamwork (8 items)	.90	.85	.77	.96	.58
Final subscales	Iterative development (4 items)	.84	.87	.66	.90	.62
	Sprints (4 items)	.95	.95	.80	.88	.73
	Stand-up meetings (4 items)	.93	.94	.75	.94	.56
	Retrospective meetings (4 items)	.91	.90	.64	.93	.43

4.3 Applicability of the Measures

AWP study requires a versatile assessment tool (see Junker et al. 2021). Phase 1 showed AWP aren't confined to an agile strategy, team type, or task dependency. Phase 2 showed AWPI measurements are similar across team types and agile transformation levels. Support teams scored worse than delivery teams on agile taskwork and collaboration (RQ1).

AWPs help external clients (here customers received IT services, maintenance, and consulting). Agile delivery and support vary most. This may have made scheduling support team work in short iteration cycles more difficult, boosting organisational value (here HR, finance, and sales teams). Our measurement invariance findings show that (1) the AWPI may be administered in different work settings and (2) observed score changes can be regarded as “actual” AWP construct changes (Vandenberg and Lance 2000). AWPI is useful for organisational and management psychology (Cortina et al. 2020).

5 Conclusion

This study examines theoretical and measurement frameworks for agile working, such as the Agile Work Practices Instrument’s factor structure, reliability, and construct validity (AWPI). AWP are connected to bureaucracy, emergent team planning, and work design. Agile task work and agile teamwork may employ autonomous team planning and job design. Using the AWPI, agile working is more relevant than previously thought. Future research will evaluate whether AWP are needed for continuous change. This study examines agile work techniques.

6 Limitations

Our validation study was thorough, however there are still constraints and unsolved questions concerning AWP measurement and methods. Our hypothesis concerning the four AWP’s distinct temporal processes (Table 1) needs testing. Brown and Eisenhardt (1997) used an inductive case study to evaluate behaviours that allow continuous growth by building “links in time” (p. 29). The four AWP’s distinct temporal processes may be analysed by providing the AWPI and connecting score differences with qualitative observations of temporal patterning (e.g., Kremser and Blagoev 2021). Evaluating how AWP alter subjective time perceptions and team reflexivity is another way to test temporal processes (Shipp and Jansen 2021). (2007). Using our framework as an example, we may expect retrospective sessions to encourage team members to concentrate on the past (Shipp et al. 2009).

7 Future Research

Cross-validating our conclusions requires new data from numerous organisations. Agile-Org has several teams but one environment. Strong managerial support for AWP and an agile transition are examples (instead of a big-bang approach; see, Denning 2021). Our results on measurement invariance (Phase 2) give us confidence in the AWPI’s psychometric qualities across samples. Using self-reported AWP measures, we recreated the component structure. Variables and organizations or industries may have different relationships. Future study should examine whether organizational settings boost (or impede) AWP’s well-being, performance, and creativity.

8 Practical Implications

AWPs are real strategies employed by companies worldwide (Annosi et al. 2020). Our greatest practical contribution may be to make agile functioning more theoretical, as Kurt Lewin said (Lewin 1945). By combining AWP with work and organisational psychology, we create a new paradigm for practitioners. This tool measures agile transformations. Our results suggest that the AWPI may be used in a range of team scenarios and as a benchmark for agile transformations.

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Digital Leadership in Education: A Meta-analysis Review

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Abstract. This article provides a complete summary of leadership theory based on empirical research papers that focus primarily on educational leadership styles. We focused on the following categories in our meta-analysis: (1) the role of leadership, (2) the influence of leadership on academic institutions, and (3) the research method for leadership. Our findings imply that it is worthwhile to investigate new models of leadership that can better match the student development with the requirements of an increasingly digitalized business world. In this paper, we suggest an exploratory sequential design study of digital leadership and provide a new definition of digital leadership. This is owing to the lack of methodological specificity in the existing leadership studies academic literature.

Keywords: Digital leadership · Meta-analysis · Styles of leadership · Education sector

1 Introduction

Electronic platforms have become the most essential tool for industry leaders' communication. Since the Covid 19 pandemic, information and communication technology is used in all areas of education in Malaysia. This has caused the adoption of new paradigm leadership practices by the leaders. To cultivate electronic platforms and integrated communication technology, institution leaders must first show an understanding of innovative use of technology, skill in applying it, and a culture that encourages trying out new ways of teaching, learning, and running schools are all important (Arokiasamy et al. 2015). Consequently, a new leadership aptitude is required due to the era's constantly shifting leadership styles (Lipman-Blumen 1992). The organisation must consider technological advances that have driven organizational advances, like putting computer systems in the workplace changes, to keep its competitive advantage (Erhan et al. 2022). This differs from traditional leadership styles that emphasize controlling, competitive, and aggressive characteristics. Subsequently, the necessity for electronic or digital leadership arises since modern organizations look to shift into digital work environments. Digital workplaces, thus according to researchers (Dery et al. 2017), are physical, cultural, and

digital solutions that ease working life in a complex, dynamic, and often unstructured work environment. However, the concept of digital leadership has received less attention in the literature, particularly in the education industry. Although earlier study has shown that further research should be undertaken on educational leaders as this topic has been the subject of conversation (Cavico and Mujtaba 2009; Gigliotti and Ruben 2017). Furthermore, researchers highlight the effectiveness of leadership is depends on technological skills (Hassan et al. 2018). Meanwhile, Arokiasamy et al. (2015) observed a dearth of ICT awareness among Malaysian educational leaders and most educational institutions adopt conventional ICT leadership. Davies and Thomas (2019) found that few studies have been done on educational leaders despite the need for professional leaders The quality of leadership would suffer if this were not achieved. Hence it is a vital to solve leadership effectiveness problems in education (Hassan et al. 2018). Additionally, 21st century leaders must use digital platforms to teach subordinates and students in education sector. Therefore, it is a vital to equip leaders with digital abilities, which could change them into digital leaders who combine transformational leadership styles with digital technology use (De Waal et al. 2016). Recognizing the importance of digital leadership, This research aims to shed light on the significance of leadership styles in the academic sector by reviewing the existing literature on the topic. The study also conducts a meta-analysis of the effects of various leadership styles on classroom performance. This study proposes a new leadership style for Malaysian universities that fits the digital age and current student generation.

2 Literature Review

2.1 The Significance of Leadership Styles in Education

Academic leaders are not just set up and support curriculum standards and development. Because they foster the development of critical thinkers, communicators, and doers, they are also a driving force in the expansion of their communities (Hassan 2018). Teachers and principals' leadership styles influence students' outcomes, school performance, and effectiveness (Adams et al. 2017; Hallinger et al. 2018; Louis et al. 2010; Harris et al. 2013). Building effective school leaders who can tackle current and future challenges, especially with access to digital information, is a top priority for many educational institutions. Leadership in higher education has been the focus of earlier studies. Pfeffer (2009) argues that college students should start learning about leadership to prepare themselves for professional life. Leadership within institutions is essential for fostering growth and innovation (Perera et al. 2015; Ghani et al. 2011; Jamilah and Yusof 2011; Tee et al. 2010). There are researchers focused on organizational improvement and institutional leaders' particular attributes or characteristics more recently (Hallinger and Lee 2013; Robinson et al. 2008). On top of that, policymakers globally strive for increased leadership development to improve education (Harris and Jones 2015a). Researchers have found that the leadership styles of educational sector leaders, such as teachers and principals, have a major impact on students' lives and the efficiency and success of schools (Adams et al. 2017; Hallinger et al. 2018; Louis et al. 2010; Harris et al. 2013). Academic leaders' responsibilities extend beyond the creation and support of existing pedagogical practices and plans. Universities are seen as the backbone of any thriving

community because they produce leaders who can adapt to changing economic conditions while supporting a strong capacity for critical thinking and clear communication (Hassan et al. 2018). It is imperative that educational institutions invest in leadership training to produce capable school leaders who can overcome current and future challenges, especially in the context of digital information, and yet lead their institutions to the intended outcomes.

2.2 The Importance of Digital Leadership on Student Development

Researchers concurred that Institutional leaders have a major impact on productivity in the workplace and academic achievement (Hallinger 2013; Leithwood and Sun 2012; Adams et al. 2017; Hallinger et al. 2018; Ahmed Jami et al. 2012). They will influence academic achievement (Harris et al. 2013). Erhan et al. (2022) found that various leadership styles have been investigated to see how they influence the behaviors and attitudes of followers. For instance, leadership styles including transformative leadership (Li et al. 2019), participative leadership (Fatima et al. 2017), and ethical leadership (Saeed et al. 2017) have all been studied in relation to novel workplace behaviors (Iqbal et al. 2020). According to literature (Hallinger 2013; Leithwood and Sun 2012; Adams et al. 2017; Hallinger et al. 2018; Ahmed Jami et al. 2012), school leaders have a major effect on organizational performance and student results (Harris et al. 2013). However, there is currently a lack of academic research on the significance of digital leadership in the academic world. Consequently, it is necessary to reconsider the perspective of leadership styles considering the current situation. This is because the contemporary environment requires more technological ability. Studies show that putting ICT into schools can help students do better in school and learn more (Becker 1993; Butzin 1992; Kozma and Croninger 1992). It is therefore imperative that educational leaders make use of ICT in their everyday work and give clear and helpful guidance on how to implement technology in the classroom.

3 Methodology

This meta-analysis confirms earlier research about the impact of various leadership styles on students' development. Many academics have found that meta-analysis is a useful tool for carefully evaluating and synthesizing findings across many different fields (Ali et al. 2015; Ceri-Booms et al. 2017; Barari et al. 2021). Most studies used quantitative methodologies. In the following part, the specifics of the studies will be discussed.

4 Findings

4.1 Leadership Models and Methods Employed in the Educational Sector

Table 1 is a compilation of leadership-related papers from older educational studies. Researchers eliminated 34 papers due to methodological problems but kept 17 that addressed leadership in education. Listed below are seventeen papers that contribute to the literature on educational leaders' methods of instruction. The table summarizes the

results of each research. Moreover, many principals have been showed to use instructional leadership, transformational leadership, transactional leadership, distributed leadership, supporting leadership, and directive leadership. Neither of the given studies proved that the institution's executives effectively managed the organization and workforce by using digital leadership. No studies have been found to date that include students' perspectives on the leadership styles employed by institution leaders. Especially in digital leadership, even though most leadership styles in the educational sector were performed by school employees. In conclusion, the statistics prove that most studies were conducted in Western countries, while just a small percentage were conducted from an Asian point of view. This is possible that Western culture is distinct from Asian culture in terms of factors like power distance. Consequently, the digital leadership styles being developed in Asian nations have the potential to improve student performance. From 2012 to 2022, the majority ($n = 9$) of the 17 selected research on leadership styles in educational sectors used a quantitative technique, while the majority ($n = 7$) used a qualitative approach. Only one study by Nguyen et al. (2017) employed a mixed-methods strategy to investigate educational leadership and administration in Vietnam. Researchers (Adams et al. 2020) employed a qualitative approach to examine how Malaysian high-performing schools develop their principals for leadership. The qualitative method was selected, and 102 principals were asked to respond to open-ended questions about their leadership roles and practices. In a separate study, researchers (Nawab and Asad 2020) used a qualitative approach to examine the leadership behaviors of an urban Pakistani school principal. The authors assert that the requirement to focus on unique conditions when dealing with persons in real-world scenarios needed the use of a qualitative method, resulting in rich and thorough data. Othman and Wanlabebeh (2012) used a quantitative method to decide the teachers' views on leadership styles in Thailand. Researchers were able to better handle and arrange the survey's many replies because to the quantitative method's use of numerical data. Also, Afifah et al. (2017) confirmed the usefulness of the Path-Goal Theory in measuring leadership preferences through their quantitative study of the most popular leadership styles among Asian youth.

Table 1. Articles on various leadership methods employed in the academic field

Author/Years	Methodology	Findings
Adams et al. (2020)	Qualitative	Instructional leaders to improve students' development and performance
Harris et al. (2017)	Qualitative	Instructional leaderships
Kaparou and Bush (2016)	Qualitative	Instructional leaderships

(continued)

Table 1. (continued)

Author/Years	Methodology	Findings
Nguyen et al. (2017)	Mixed-method	Instructional leadership
Massry-Herzallah and Arar (2019)	Qualitative	Education systems
Yokota (2019)	Qualitative	Characteristics and competencies of the principal
Seong and Ho (2011) 5. Othman and Wanlabeh (2012)	Qualitative	Transformational leader characteristics
Salehzadeh et al. (2014)	Qualitative	Transformational leader characteristics
Hassan et al. (2018)	Critical review	Leadership style
Nor Amin et al. (2017)	Qualitative	Path-Goal Theory
Arokiasamy et al. (2014)	Qualitative	Transformational leader characteristics
Ngang (2011)	Qualitative	Leadership style
Sirisookslip et al. (2015)	Qualitative	Leadership styles Supportive leadership, and participative leadership styles
Jyoti and Bhau (2016)	Qualitative	Transformational leadership
Mwesigwa et al. (2020)	Qualitative	Leadership style
Ali and Zulkipli (2018)	Qualitative	Strategic leaderships

5 Discussion

The goal of this study is to show the research that has already been done on leadership in the educational sector. The investigation gives strong proof that there are more than one leadership roles in the education sector. Conventional leadership styles like instructional leadership, transformational leadership, transactional leadership, distributed leadership, supportive leadership, and directive leadership were used in most studies on leadership styles in education, as shown by the results of earlier studies. The findings also show that only a few leaders are involved with putting ICT into place in educational settings (Anderson and Dexter 2005; Feldner 2003). Even though there are not that many studies on leadership for technology change in education, it is agreed that leadership is necessary for the successful deployment of ICT. Also, most research findings concentrated on showing the diverse ways that school principals lead. There has not been a lot of research on the types of leadership used in higher education and how they can help students become future leaders. So, the people who did this study think that doing it at a university will help them find out if there is a link between how people lead and how successful they are as future leaders. Since most of the research done before has been from an academician's point of view, it is important for this study to include what students think about the styles of leadership used by institution leaders. Bloom and

McClellan (2016) say that students are also seen as the followers of institutional leaders when analyzing leadership discourse. Student performance can be improved through digital leadership. Before looking at how variables are related, the researcher had to explain why digital leadership can help students do better in school. Considering the reviews, no research has been conducted in a digital leadership from the listed articles. Considering the velocity of business operations and transformation, businesses should accelerate in investigating new digital business prospects. According to Tanniru (2018), organizations should use entrepreneurial thinking to produce innovative concepts that offer benefits to clients, design digital, IT-enabled services using advanced technology, and improve organizational skills to meet consumer demands. He said that companies need agile IT systems and business strategies, as well as “co-leadership of IT” among executives to achieve this. Hence, the academic sector, which feeds the digital economy’s labor, must modernize to meet business needs. Based on this review’s gap, educational leaders could use digital leadership to improve academic staff performance and student growth. Covid-19 has affected the education industry, making digital leadership necessary for institution leaders. All levels of education must use ICT for teaching and learning with students. Incorporating leaders and innovation is important for a differentiation strategy, and college should be where digital leaders are made. Digital leadership is being able to lead people and organizations toward digital economy and be flexible in a digital world that changes quickly. Theoretically, this meta-analysis recognizes the paucity of mixed-method leadership studies. Future research will therefore employ a mixed-methods approach to examine the effect of digital leadership on student accomplishments. The goal of this upcoming study is to create a new way to measure digital leadership. The study will use a mixed-method approach, called a sequential exploratory research design, to collect and analyze the data. The purpose of this research is to prove a new model, which requires a close look at every part. Therefore, The blended method is the preferred method. Following this is the checking and confirming the model that was made. Thus, combining qualitative and quantitative research is therefore essential for gaining more correct responses. There are two distinct phases. Focus group research will be done in the first phase (Qualitative) to talk about the things that will affect how the digital leadership model for students is made. Through a thematic analysis of interview data, a list of factors that affect digital leadership will be made. This will also be backed up by a review of the literature about how to measure digital leadership. After the criteria are confirmed, measuring tools will be made. In the second phase, which is called “Quantitative”, a survey questionnaire will be made to collect more data. Before the real data collection, there will be a pilot study to test the measuring tools. This is a crucial step to take after the focus group discussion to make sure that the things that are made are reliable and easy for the population and sample group to understand. The demographics and samples that will be used to collect data will be chosen based on the problems and concerns that are happening right now. Malaysian and Indonesian university students will be chosen as a sample to make sure this study is complete and can be applied to the whole region. This project will collect information through an online survey with a questionnaire that people can fill out on their own.

6 Conclusion

Liebowitz and Porter (2019) suggest that improving leadership in educational institutions is useful. A modern style of leadership called “digital leadership” could affect the education system in Malaysia. First, it will add to what we know about student growth and leadership, since digital leadership has not yet been used in many studies to help student development. Second, based on earlier research on leadership styles in education, especially from a Malaysian point of view, the methodological part of the current study should show that digital leadership is needed to help students develop in Malaysia. Future job seekers could be trained in the classroom to be ready for the challenges of the digital age.

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A Study on Effect of Coronavirus Outbreak on India's Goods and Service Tax Revenue: An Analysis

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Abstract. The Coronavirus Outbreak is on a seeming drop in India, the effect of the epidemic on the economy is still mounting, as fresh waves of COVID-19 contagion are nodding nearby. Any projected-on income influence, thus, might be allowed meanwhile inadequacy and restrictions. Yet, as per GDP statistics of the previous two quarters it currently exists, and as per Goods and service tax illustrates the positive indication of regaining amongst all return's channels. The study emphasizes the problem of reimbursement to states in the case of a revenue deficit protected in the existing rule, and the states In India will have to experience the revenue deficit, which may be helped in the evaluation of goods and service tax. The study subsidizes the current discussion on Goods and Service tax compensation provisions of states by allocating another set of budgets for the financial year 2021.

Keywords: Goods and service tax · Revenue · Covid-19 · Revenue under projected and shortfall calculation and GDP

1 Introduction

Goods and service tax is one of the most important to the State Government. The statistical data and the report reveal that in October 2020 there was an increase in GST collection amounting to 10.2% and this is the II successive time of the present fiscal year which demonstrated a productive development (year-on-year) in Goods and Service Tax collection. This year-on-year improvement in the Indian Economy is a constructive signal of regaining from the continuing COVID-19 epidemic. The development in Goods and Service tax collection assumed in October 2020 is an indication of the slow revealing of the economy, the purchasing power of the consumer and the increase in the consumption and demand on account of festival seasons. Worries adjoining Goods and service tax assortment in the year 2020-2021 have sharpened on account of continuous

issues of the pandemic. Since there is a gradual increase in the purchasing power of the consumers and the economy is slowly regaining from the pandemic. The study shapes different situations based on regular (year-on-year) development contributions from the implementation of Act 2017 to till 2020, different expectations are likely to base on GST collection for the remaining period of the financial year. This paper attempted to understand the measures taken by the central government in GST compensation distribution to the state, collection of Cess and Revenue Gap and shortfalls in Goods and Service Tax collection. Due to the coronavirus outbreak, the Researcher has undertaken the positive side of the present pandemic situation is the unique study of this paper.

The Study on Effect of Coronavirus outbreak on India's Goods and Service Tax Revenue: An Analysis is based on the secondary data published by NIPFP, State Budget Documents; PRS and GST collection from FY2017 to FY 2020-21 to analyze Goods and service tax Revenue collection, their distribution to state and shortfall collection and role of the central government in controlling the Revenue under projected and the efforts of Goods and service council in meetings.

2 Review of Literature

Dr Namita, November 2018, In this paper, the author used secondary data and the study was exploratory the author analyzed the influence of Goods and service tax and its effect. *International journal of basic and applied ISSN 2249-3352 (P) 2278-0505 Impact of GST on India.*

Mr.R. Rajasekaran1, Mr.P. Pavithran2 © May 2020 | IJIRT | Volume 6 Issue 12 | ISSN: 2349-6002 *An Analysis of GST Collection of India (State Wise) with Special Reference to Calendar Year (2019–2020)*. The Author of the article made a thorough study on the basics of Goods and service tax law in India, its history and the execution of the Goods and Service Tax Law the act which came into existence in July 2017. The author emphasised the other indirect tax laws which were earlier in existence and restricted the Goods and service tax collection for the calendar year 2019–2020.

Anand Nayyar** Inderpal Singh, February 2018, •. In this paper, the Author emphasised the relation of the taxation system, the Goods and Service Tax perception along with important working, the author also made a comparative study of the Indian Goods and Service tax system with the rest of the world's taxation system. The author also existing detailed attention concerning advantages to many divisions of the Indian economy after forcing Goods and Service Tax drawn some experiments of Goods and service tax. *Indian Journal of Finance*

3 Research Gap

Numerous types of research have been done to explore Goods and Service tax, but all the studies have been made on the adverse sides of the Implementation of GST and the hazards involved due to the Collection of GST, and its impact on the Economy. The topic "A Descriptive Study on Impact of Covid- 19 on India's GST revenue: An Analysis. a special reference to Collection and Shortfall", analyzes how GST helped the Revenue to the centre and state to mitigate the Collection of GST and shortfall due to

the coronavirus outbreak. The Researcher has undertaken the positive side of the present pandemic situation is the unique study of this paper.

4 Methodology

an effort to examine the GST revenue centre and state a distinct situation to Collection and Shortfall”, to analyse how GST helped the Revenue to the centre and state to mitigate the Collection of GST and shortfall due to the coronavirus outbreak. For this purpose, the researcher has undertaken the Published secondary data from State Budget Documents; PRS sources Indian Express published articles and various Journals.

5 The Objective of the Study

- To Understand the Measures taken by the centre in Goods and Service Tax compensation to the states.
- To Analyse Goods and Service Tax compensation and collection cess.
- To Study the Revenue Gap and shortfalls in Goods and Service Tax collection.

6 Revenue Under Projected

Revenue under Projected is the revenue which is included in GST with the situation considering 2015-16 as the base year at fourteen per cent (14%) yearly development rate allowable for income forecast. The change among the predictable Goods and Service Tax return cess collection in 2020-21 and the amount of the income gaps of states offer the predictable extra revenue condition for full GST return payments to states. Admitting that a part of income loss is owing to the epidemic and that the reimbursement device to fill the shortfall for 2020–21 and near-term existences are still surfacing in the GST Council, the study pays to the continuing conversation on GST compensation requirements of states by projecting another set of numbers for the year 2020–21.

The professionals forecast that If the extensive product of the projection is well-thought-out, real Goods and service tax receipts may drop from Ten Lakh Crore to Twelve lakh Crore. If the fine group of the projection is considered, actual Goods and services tax receipts in 2020–21 may drop between Rs. Almost 11 lakh crore to Rs. 12 lakh crore. Yet, different states may have different shortfalls subject to development in Goods and Service Tax collection that would be recovered from November 2020 to March 2021.

6.1 Shortfall Calculation

The shortfall is calculated assuming a 14 per cent annual growth in GST collections by states over the base year of 2015-16. A shortfall in the Goods and Service tax compensation fund is likely to change from Rs. 1.95 lakh crore to Rs. 2.45 lakh crore in 2020-21. In the Goods and Service Tax council meeting held on August 2020 which happened to be the 41st Council meeting it was estimated that the state may demand Goods and Service

Table 1. Projected GST collection, revenue under protection and shortfall in GST compensation cess collection in 2020–2021 (Rs. Crore)

Revenue source	Scenario I	Scenario II	Scenario III	Scenario IV
Projected GST Collection of State A	475,700	481,575	439,060	444,262
Revenue Under (B)	765,034	765,034	765,034	765,034
Revenue Gap (C)	290,598	284,860	326,693	321,321
Projected GST Compensation Cess collection	86,477	90,386	82,242	85,757
A shortfall in GST Compensation Fund (E = C-D)	204,122	194,474	244,451	235,564

Sources: NIPFP Study

tax compensation up to Three lakh Crores (Rs.3 Lakh Crore) Besides the projected GST compensation cess collection of Rs. 65,000 crores, the shortfall in GST compensation fund was expected to be Rs. 2.35 lakh crore in 2020–21.

Table 1 Shows Projected GST Collection, Revenue under Protection and Shortfall in GST Compensation Cess collection in 2020–2021 in different scenarios like Scenario I, II, III and IV respectively. The Projected GST Collection (A) as shown in the table in the given four Scenario compared with Revenue under (B) derived a Revenue Gap (C) which shows it is fluctuating and also a Shortfall in GST Compensation fund (E = C-D) (Fig. 1).

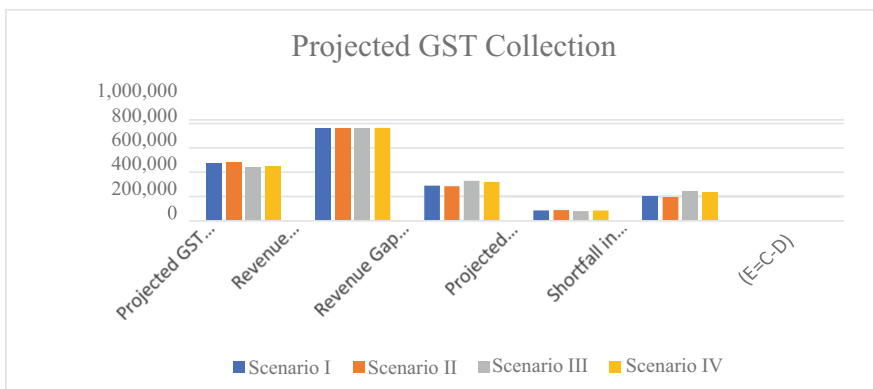


Fig. 1. Graphical presentation of projected GST collection

Goods and Service Tax Compensation Cess Collection: As per Goods and Service Tax Compensation to States Act 2017. The Compensation Cess under GST is levied by GST – Compensation to States Act 2017. Under this act, the centre has to compensate the state for the loss that the state suffered because of the impact of the Goods and Service tax since the GST is a consumption-based taxation system.

Table 2. Summary of annual goods and service tax collection 2017–2018 to 2020–2021

Year	Cess collection (Rs Crore)	Compensation requirement (Rs Crore)
2017–18	62,612	48,785
2018–19	95,081	81,141
2019–20	95,444	165,302
2020–21	77,380	300,000

Table 2 shows that the year-wise Cess Collection from 2017–2018 starting from Rs.62,612 Crores to and compensation requirement of Rs.48,785 Crores likewise 2018–2019, 2019–2020 and 2020–2021, which shows a gradual shortfall in Cess collection and leads to a deficit in compensation (Fig. 2).

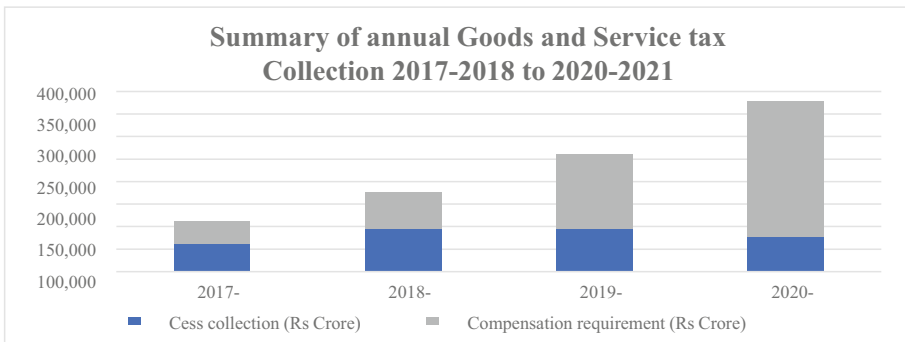


Fig. 2. Graphical representation summary of annual goods and service tax collection 2017–2018 to 2020–2021

Goods and Service Tax Compensation Cess Collection Shortfall: The GST compensation cess collection played a major role in the financial year 2019–2020 in the states required Rs.1.65 lakh crore which was two times more than that of 2018–19 which was compensated by the centre through cess collected fund. This caused the state a shortfall of approximately Rs.70,000 crore again this was partially compensated through 2020–2021 cess collection. Due to the implementation of Goods and Service tax the centre shoulder all the responsibility of compensating the state through cess collection. The data of the council also reveals in 2020–2021 the state requirement is to increase to 3 lakh crores, and the shortfall is expected to be around 2.3 lakh crore as reliable sources say. This shortfall of about 1.1 lakh crore will be met by the state through borrowings, and the balance will be paid in June 2022. In nutshell, the study shows that there is an insufficient fund to pay (compensate the states) (Table 3).

Table 3. Classification of tax revenues in the states

Sources of Direct Taxes Revenue	Sources of Indirect taxes Revenue
Taxes on agricultural income	State goods and services tax (SGST)
Land revenue	Sales tax/ value added tax (VAT)
Stamp duty and registration fees	State excise duty
	Taxes on vehicles
	Taxes and duties on electricity

(Sources: State Budget Documents; PRS.)

NB: (i) At present Income from Agriculture is accepted from the charge of income tax regardless of the level of income, excluding those imposed on estates by the states like Assam.

State Goods and Service Tax: The State Goods and Service tax is one of the major sources of own tax Revenue for the State for the financial year ending 2018–2019 and 2020–2021 the State Goods and Service Tax was 41%. The implementation of Goods and Service Tax replaced many Indirect taxes of the state, whereas the state had direct control over these taxes earlier and by the implementation of State goods and service tax the rates are decided by the Goods and service tax council.

Revenue Gap: The State fails to earn revenue for a significant period due to the implementation of the State Goods and Service tax.

The revenue gap in state Goods and Service tax collection is likely to change i.e., 2.85 lakh crore to Rs. 3.27 lakh crore. Goods and Service tax compensation cess collection in 2020–21 is likely to change from Rs. 82,242 crores to Rs. 90,386 crores (Fig. 3).

Table 4. State-wise compensation outstanding from centre current fiscal year ending 31st March 2021–22

Name of the state	Amount in Crores (Rs)
Maharashtra	11,563
Uttar Pradesh	6,954
Tamil Nadu	6,733
Delhi	5,461
West Bengal	4,292

Table 4 shows the state-wise compensation outstanding from the centre for the present fiscal year ending 31st march 2021–2022. There is a positive sign in the outstanding amount it is year-wise declining. It shows that taxpayers are paying their taxes in time (Table 5).

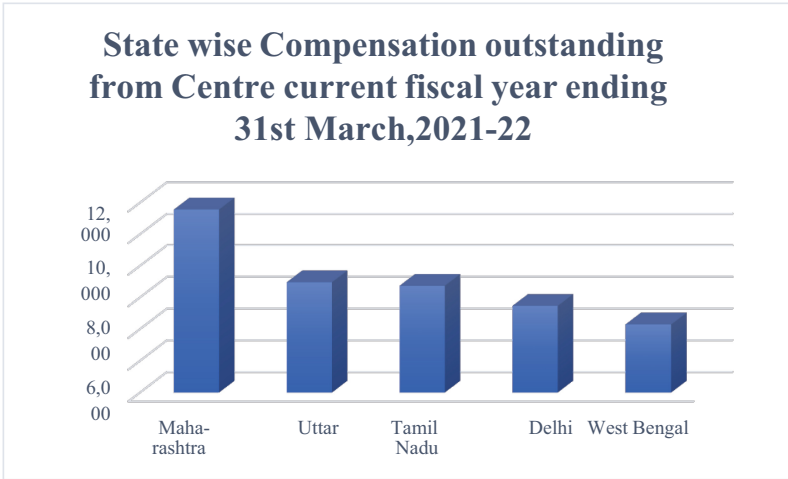


Fig. 3. Graphical representation of state-wise compensation outstanding from centre current fiscal year ending 31st march 2021–22

Table 5. GST collection from FY2017 to FY 2020–21

	GST collection from FY2017 to FY 2020–21			
	FY2017–18	FY2018–19	FY2019–20	FY2020–21
April	–	1,03,459	1,13,865	32,172
May	–	94,016	1,00,289	62,151
June	–	95,610	99,939	90,917
July	–	96,483	1,02,083	87,422
August	95,633.00	93,960	98,202	86,449
September	94,064	94,442	91,916	95,480
October	93,333	1,00,710	95,379	1,05,155
November	83,780	97,637	1,03,491	1,04,963
December	84,314	94,726	1,03,184	1,15,155
January	89,825	1,02,503	1,10,818	1,19,875
February	85,962	97,247	1,05,361	1,13,143
March	92,167	1,06,577	97,590	1,23,902
Grand Total	7,19,078	11,77,370	12,22,117	11,36,803

The above table shows the GST collection from FY2017 to FY 2020–21. Monthly wise and yearly wise the GST collection. There was growth in GST Collection from FY2017to FY 2018–19. But The GST collection started decreasing from FY2019–20 to

FY2020–21, due to the Coronavirus outbreak and continuous lockdown to the Pandemic (Fig. 4 and 5) and (Table 6).

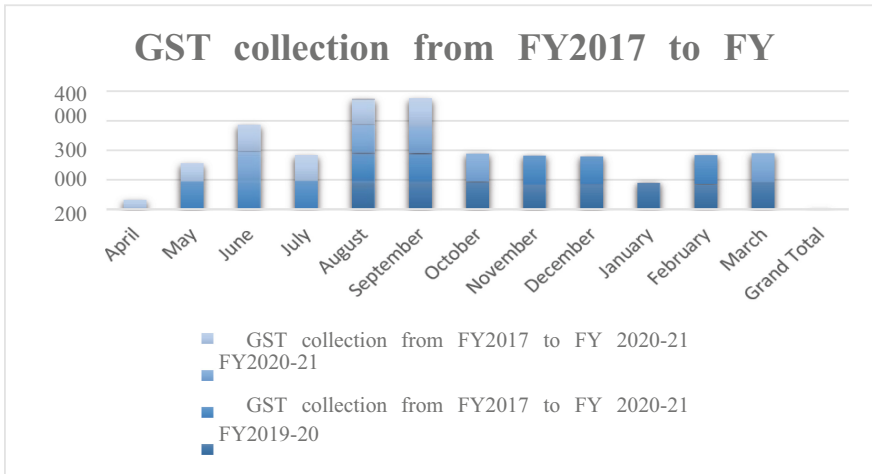


Fig. 4. GST collection from FY2017 to FY 2020–21 for the financial year 2021–2022

Table 6. Gross GST collection

Month	FY 2020–21(Rs.in Crore)	FY 2021–2022(Rs.in Crore)
April	32172	139708
May	62151	102709
June	90918	92849
July	87422	116393
August	86449	112020
September	95480	117010
October	105155	130127
November	104963	–
December	115174	–
January	119875	–
February	113143	–
March	123902	–
Total	1136805	810816

Sources: Ministry of Finance, posted 29th November 2022

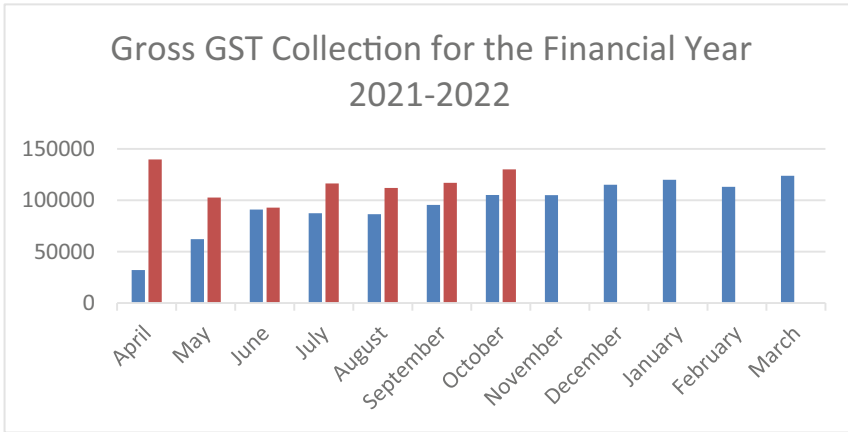


Fig. 5. Graphical Presentation of Gross GST Collection for the Financial Year 2021–2022

7 Findings

- Some of the Important States in India such as Kerala Punjab, Goa and Chhattisgarh are expected very big revenue gaps. The total income slit of important States may differ from Rs.2.5 lakh crore to 2.9 lakh crore.
- The State Goods and Service Tax have limited decision power concerning tax charges on goods and services. Subsequently, states have limited freedom on a huge portion of their own tax revenue as the receipts from State Goods and Service Tax depend on tax rates decided by the GST Council.
- Some of the states in the country are predicted to receive more than 50% of their own revenue from State Goods and Service Tax for the financial year 2020–21 (ie, Jammu and Kashmir, Manipur, and Mizoram)
- There is an outstanding GST compensation in the states for the present fiscal year estimated at around Rs.53,600 crores.
- The fund raised by imposing cess on the maximum tax slab on non-essentials, demerits and sin goods is used to pay compensation.
- As per the NIPFP report, the estimated shortfall in the Goods and Service Tax compensation fund is approximately Rs.2. Lakh crores.

8 Conclusion

Protection of Goods and Service tax income is anticipated in achieving reliability in filing GST returns. The impact of Coronavirus is also a factor that triggered the threat for taxpayers to disclose Goods and Service Tax returns in the first quarter of 2020–21. The Coronavirus outbreak no doubt brought the whole economy to a standstill, but developing economies like India should adopt new strategies to move on. Even though the pandemic triggered stress for taxpayers in filling the goods and service tax returns from previous years.

It is analysed that stability in Goods and Service tax collection and scheme enhances the approachability best Projection can be achieved. Report and data related to all revenue collection such as Gross state value Addition (GSVA) and other important mechanisms will help to refine the projection.

To conclude Protecting the Goods and service tax revenue is possible when the taxpayer maintains stability in filling their returns. The study is limited only to GST collection and distribution of revenue only to a limited period and is based on secondary data.

There is further scope for the study taking into account of the present collection of revenue and distribution of revenue to the important sectors of the economy for the financial year 2022–2023.

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Framework Development of the Internet Ethical Attitude Scale for University Students

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Abstract. This article presents the research work of developing the Internet Ethical Attitude Scale (IEAS) for university students, supported by various models and theories on internet ethics, which gave insights into the standard variables used by most researchers in this field. The results from the questionnaire survey on 340 university students in Malaysia and quantitative analysis using Partial Least Square Structural Equation Modelling (PLS-SEM) have brought out the significance of knowledge and awareness, attitude, perceived usefulness, subjective norms, and fear of consequences. However, perceived behaviour control, one of the variables measured, has no positive relation to intention toward internet ethics. The results and findings from this IEAS framework could be used as a guideline for further research and implementation by the institutes of higher learning, governing bodies and ministries.

Keywords: Internet ethics · Cyber ethics · Student internet ethic · Internet ethics scale

1 Introduction

Teaching and learning in university is increasingly being influenced by how students interact with computers and the Internet. During the COVID-19 pandemic, physical classroom teaching and learning have been shifted to fully digital. Collaborations among students and researchers, communication between students and teachers, and idea generation in solving problems are all influenced by the internet. Nevertheless, overall students have a low level of knowledge in the ethical use of computer and information technology (IT) resources [1].

Considering the severity of this cyber and internet ethics issue, this study is convinced that several factors significantly affect the intention to be ethical in using, communicating, and behaving on the Internet. This intention must be investigated at a very young age, i.e., students, to ensure that they are ethically aware of all aspects of the Internet usage before embarking on a career. The objective of this study is to investigate the situation at its root by developing a reliable and validated Internet Ethical Attitude Scale (IEAS).

This paper is organized as follows. The following section reviews previous research on student Internet behaviour. The methodology section then describes the conceptual framework development, questionnaire design, data collection method, and analysis techniques. The results are then presented in the subsequent section. Before the conclusion, this paper discussed the result corresponding to the ethical behaviour of students on the Internet.

2 Related Works

2.1 Factors Contributing to Students' Behaviour on the Internet

Among factors that influence students' intention to violate the Internet ethics rule in academics include lack of motivation and laziness to complete the lecturer-assigned task; taking for granted the vast amount of online resources; job demands; inability to distinguish between ethical and unethical behaviour; and insufficient time with a heavy workload for the assigned task [2]. Majority of reasons for unethical behaviors fall under the deontology theory [3]. Previous research indicates that knowing what ethical action is, does not necessarily relate to making ethical decisions and actions [4]. However, personality traits such as warmth, kindness, honesty, responsibility, organisation, self-motivation, and openness were found to positively influence individuals' willingness to follow Internet ethics practices [5].

2.2 TPB-Based Models to Assess Users' Internet Behaviour

Jafarkarimi [4] has developed a model of ethics to measure and investigate the factors influencing students' intentions toward cyberbullying based on Theory of Planned Behaviour (TPB) with three additional variables - moral obligation, perceived threat of legal punishment, and overall gain. This study found that students' intentions to engage in cyberbullying were influenced by the subjective norm and moral gain, but not their attitudes. In a study conducted in Saudi Arabia [6], TPB and three additional constructs, namely social media use, lack of supervision, and absence of rules and legislation, were used to propose a model to examine students' intention to engage in cyberbullying and its effect on academic achievement. The findings revealed that all the constructs affect cyberbullying students. Another study was conducted to develop a model predicting workers' Islamic ethical work behaviour (IEWB) in Brunei, also using the TPB with an addition of the Islamic Religiosity (IR) principles [7]. The findings revealed that intention is not always correlated with behaviour; even if a person intends to work ethically following Islamic principles, the resulting behaviour depends on perceived social norms, surroundings, degree of control to do it, and religious level. Recent research has

examined how personal traits relate to TPB and how TPB constructs influence students' intention to engage in ethical Internet behaviour [8], with the Internet ethics curriculum serving as a moderating variable to predict students' intentions. The study demonstrated that the Internet ethics curriculum strengthens the positive correlation between attitude toward ethical behaviour and intent to engage in Internet-related ethical behaviour.

2.3 Internet Ethic Scale Development

A set of general Internet attitudes scales were developed due to a lack of content validity, a focus on a specific sample target, and poor assessment methodology [9]. The development involved three studies that have gone through the development and refinement of the Attitudes Towards the Internet Scale (ATIS), the concept of attitude presented by Fishbein and Ajzen (1972). The overall reliability score was low but excluding individuals' inconsistent responses has increased internal consistency. Joyce and Kirakowski [10] developed a scale known as General Internet Attitude Scale (GIAS), that measures the attitude of individuals to the Internet based on social psychological theory, which includes three components: affect, behaviour, and cognition. The items for this scale were developed into four factors which are Internet Affect, Internet Exhilaration, Social Benefit of the Internet, and Internet Detriment. The set of items was reduced from 25 items to 21 items and achieved satisfactory reliability. A scale was developed and validated to measure unethical attitudes toward ICT use from university teachers based on theoretical background Attitude Towards Unethical Information Technology Use and Unethical Attitudinal Model in the context of IT Use [11]. The final set consists of 13 items with high consistency, as valid factor loadings and the model's validity was proven. On the other hand, an attitude scale known as Test of e-Learning Related Attitudes (TeLRA) was developed and validated to assess teachers' attitudes toward e-learning [12]. Test of Science Related Attitudes (TOSRA) and Technology Acceptance Model (TAM) were referred to and adapted to create the TeLRA scale. Six themes were used in the development of the items, resulting in a total of 60 items created showing acceptable reliability, but external reliability or predictive validity was not examined in this study.

3 Research Methodology

3.1 Conceptual Framework Development

The Internet Ethical Attitude Scale (IEAS) conceptual framework was initially developed by identifying the most prevalent unethical student behaviours, such as digital piracy (using crack software and downloading copyrighted media), digital plagiarism, inappropriate texts, and providing false information for an account. The common unethical behaviours were then linked to the Deontology Theory, Deterrence Theory, TAM, IR principles, and TPB theories. The measures of the constructs in this study were adopted, adapted, and modified from prior studies based on a comprehensive literature review, resulting in the developing of ten constructs with 79 items. The constructs include Knowledge and Awareness (8 items), Fear of Legal Consequences (6 items) and Fear of Punishment (6 items) were constructed from Deontology Theory; Ease of Use (6 items)

and Perceived Usefulness (19 items) were constructed based on the Theory of Technology Acceptance adapted and modified from [13]; and Religious Principle (6 items) were constructed based on Islamic Ethical Principles. Based on TPB, four additional constructs were developed: Attitude (10 items), Subjective Norms (6 items), Perceived Behaviour Control (PBC) (6 items), and Intention towards Internet Ethics (6 items). In this study, students' willingness to engage in internet-ethical behaviour was used to evaluate their internet-ethical intentions. Figure 1 depicts a visual representation of the framework of this research and a summary of its hypotheses.

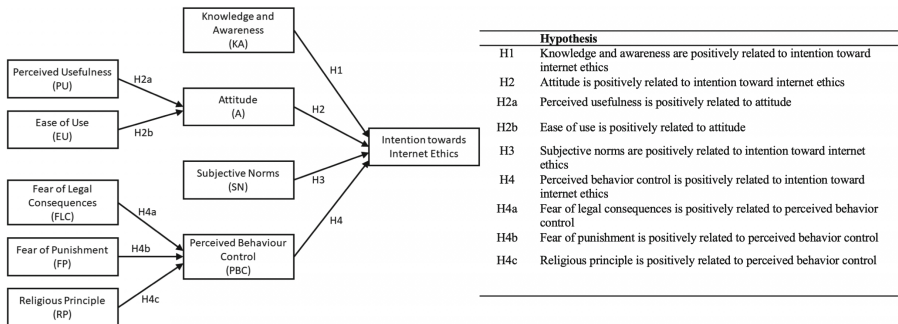


Fig. 1. Framework of the research model and summary of the hypothesis

3.2 Questionnaire Survey Design, Pilot Study and Data Analysis

A set of questionnaires was developed based on the results of conceptual framework. The questionnaire consists of five sections: 1) demographic information including gender, religion, ethnicity, education level, institution type, field of study, and family income; 2) knowledge and awareness, to determine how knowledgeable the respondent is about internet ethics; 3) plagiarism and academic dishonesty; 4) copyrighted media, which is one of the most significant ethical issues; and 5) misuse of IT resources. All questions are measured on a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) except for demographic variables. A pilot study was conducted to test the questionnaires. 49 students majoring in computer science at private universities participated in the study.

Figure 2 shows Cronbach's Alpha value for each construct resulting from the pilot study. Cronbach's Alpha for all constructs except Fear of Legal Consequences, Ease of Use, and Subjective Norms are above the acceptance level based on the guidelines mentioned by [14] where Cronbach's Alpha value above 0.90 is considered very reliable and has excellent internal consistency, above 0.80 is good, above 0.70 is acceptable, above 0.60 is questionable, above 0.50 is poor and below 0.50 is unacceptable. In addition, according to [15], a Cronbach's Alpha value between 0.6 and 0.8 is deemed acceptable and reliable, whereas a value below 0.6 is deemed low and unreliable. However, according to [16], a small sample size could produce potentially unstable reliability estimates

No	Construct	Cronbach's Alpha	Number of Items
1	Knowledge and awareness	0.777	8
2	Fear of legal consequences	0.476	6
3	Fear of punishment	0.725	6
4	Ease of use	0.569	6
5	Perceived usefulness	0.895	19
6	Religious principle	0.767	6
7	Attitude	0.769	9
8	Subjective norms	0.477	6
9	Perceived behaviour control	0.821	5
10	Intention	0.609	6

Fig. 2. Reliability test results (n = 49)

of population reliabilities. Thus, the items in these constructs are preserved as their reliability are believed to increase as the sample size increase.

Then, a cross-sectional survey was conducted. The questionnaires were distributed to public and private university students between the ages of 18 and 24 residing in Malaysia via online platforms.

The analysis in this study was done using statistical software (SPSS) and PLS-SEM software (SmartPLS). PLS-SEM was utilised to evaluate the theoretical framework from a predictive standpoint [17]. PLS-SEM can easily estimate a complex model with a smaller sample size without making distributional assumptions about the data [17, 18]. Following the recommendations, the sample size should be 10 times the number of arrows pointing to constructs. In this study, the number of arrows pointing to the constructs is nine, whereas the usable responses are 340, which passes the requirement.

4 Results and Findings

4.1 Descriptive Analysis and Partial Least Square Structural Equation Modeling (PLS-SEM)

The response rate of this survey is 82.73%, where 39.1% participants are male and 60.9% female. Most of the respondents were a degree students (48.8%), practices Islam (85%), and a Malay (80.6%). Kruskal-Wallis analysis was carried out to test whether there is a difference in respondents' intention toward internet ethics based on their demographic backgrounds. The result shows that there is no statistically significant difference with respect to gender ($\chi^2(1) = 3.190, p > 0.05$), education level ($\chi^2(2) = 3.861, p > 0.05$), institution type ($\chi^2(1) = 0.726, p > 0.05$), field of study (i.e., computer science and IT vs non computer science and IT) ($\chi^2(1) = 0.704, p > 0.05$) and family income ($\chi^2(2) = 0.050, p > 0.05$).

The first-order PLS-SEM was conducted to verify the structural validity of the constructs. The 10 developed constructs with 79 items were made into the PLS-SEM model, which has unidirectional predictive relationships between each construct that are linked with the observed items [19]. The evaluation of the PLS-SEM is based on measurement models and structural models.

4.2 Measurement Model Assessment

The assessment of the measurement model involved evaluations of convergent validities, reliabilities, and discriminant validities of the constructs.

a. Reliability and Convergent Validity (n = 340)						
Constructs	Items	Loadings	Alpha	rho_A	CR	AVE
Attitude (A)	A4	0.849	0.808	0.814	0.878	0.646
	A5	0.822				
	A6	0.903				
Perceived Usefulness (PU) + Ease of Use (EU)	A10	0.612	0.884	0.904	0.913	0.679
	EU1	0.868				
	EU2	0.712				
Fear of Consequences (FC)	PU1	0.853	0.867	0.888	0.891	0.508
	PU2	0.823				
	PU3	0.854				
	FLC1	0.800				
	FLC6	0.686				
	FP1	0.765				
Intention toward Internet Ethics (ITIE)	FP2	0.636	0.782	0.795	0.851	0.534
	FP6	0.663				
	RP1	0.801				
	RP2	0.646				
	RP6	0.684				
	ITIE1	0.656				
Knowledge and Awareness (KA)	ITIE3	0.709	0.671	0.705	0.802	0.510
	ITIE4	0.788				
	ITIE5	0.799				
	ITIE6	0.782				
	KA1	0.591				
Perceived Behaviour Control (PBC)	KA3	0.753	0.764	0.787	0.839	0.512
	KA4	0.779				
	KA5	0.792				
	PBC1	0.717				
	PBC3	0.787				
	PBC4	0.751				
Subjective Norms (SN)	PBC5	0.577	0.762	0.767	0.848	0.584
	PBC6	0.728				
	SN1	0.689				
	SN3	0.811				
	SN4	0.768				
SN5	0.783					

Abbreviations: FLC: Fear of Legal Consequences, FP: Fear of Punishment, RP: Religious Principle

(a)

b. HTMT Ratio of Correlations (n = 340)							
Constructs	A	FC	ITIE	KA	PBC	PU	SN
A							
FC	0.227						
ITIE	0.644	0.186					
KA	0.281	0.282	0.446				
PBC	0.220	0.568	0.150	0.217			
PU	0.762	0.197	0.680	0.300	0.152		
SN	0.664	0.144	0.889	0.519	0.088	0.865	

Abbreviations: A: Attitude, FC: Fear of Consequences, ITIE: Intention toward Internet Ethics, KA: Knowledge and Awareness, PBC: Perceived Behaviour Control, PU: Perceived Usefulness, SN: Subjective Norms

(b)

Fig. 3. (a) Reliability and convergent validity (n = 340). (b) HTMT ratio of correlations (n = 340)

Figure 3a presents the measures of the reliability and convergent validities for each construct. The factor loadings of the items in the model are considered acceptable as the minimum acceptable loadings are above 0.50 [20]. Although factor loadings of more than 0.70 are preferable [21], factor loadings of less than 0.70 are common in social science studies [22]. According to [23], items with low loadings (0.40 to 0.70) can only be considered for removal if the removal of the items increases the composite reliability (CR) or average variance extracted (AVE) over the recommended threshold. The items (i.e., A10, FLC6, FP2, FP6, RP2, RP6, KA1) should not be removed as AVE and CR have already passed the recommended value.

Reliabilities are evaluated based on Cronbach’s Alpha, rho_A, and CR. As in Fig. 3a the value of Cronbach’s Alpha, rho_A, and CR of each construct is over the recommended threshold (exceeding 0.60) [24], indicating the reliability of the constructs. Convergent validity for each construct is acceptable as AVE value greater than 0.50 [17].

The initial 10 constructs are reduced to seven constructs to ensure discriminant validity is achieved. Items that have high cross-loadings from multiple constructs should be removed, or the constructs which have high cross-loadings should be combined into one construct [25]. In this study, Perceived Usefulness and Ease of Use are combined

into one construct, and Fear of Legal Consequences, Fear of Punishment, and Religious Principle are combined into another construct. The discriminant validity (as in Fig. 3b) is achieved as the value of the HTMT ratio of correlations is less than 0.9 [24]. The finalized framework is presented in Fig. 5.

4.3 Structural Model Evaluation

When the reliability and validity of the constructs are achieved, then the evaluation of the structural model can be done. The structural model is assessed using the coefficient of determination (R^2), the blindfolding-based cross-validated redundancy measure (Q^2), and the significance of the path [17].

	Dependent Variable	Independent Variable	Path Coefficient	Standard Deviation	t-statistics
H1	ITIE	KA	0.117	0.043	2.732**
H2	ITIE	A	0.210	0.046	4.597***
H3	ITIE	SN	0.561	0.055	10.157***
H4	ITIE	PBC	-0.157	0.045	3.470**
H2a + H2b	A	PU	0.689	0.031	22.361***
H4a + H4b + H4c	PBC	FC	0.523	0.065	8.052***
R ² A = 0.474			Q ² A = 0.301		
R ² ITIE = 0.552			Q ² ITIE = 0.281		
R ² PBC = 0.274			Q ² PBC = 0.126		

Notes: **p-values < 0.05, *** p-values < 0.001

Abbreviations: A: Attitude, FC: Fear of Consequences, ITIE: Intention toward Internet Ethics, KA: Knowledge and Awareness, PBC: Perceived Behaviour Control, PU: Perceived Usefulness, SN: Subjective Norms

Fig. 4. Statistical results of structural model (n = 340)

Figure 4 presents the statistical results of the structural model. R^2 of the dependent variables can be used to determine the strength of the structural path with a minimum acceptable value of R^2 is 0.10 [17]. Thus, the value of R^2 in this study is adequate. The predictive relevance is established in this study where the value of Q^2 is over 0 [17].

Then, the hypotheses were tested to examine the significance of the relationship between the constructs. Knowledge and Awareness has a positive relationship with Intention toward Internet Ethics ($\beta = 0.117, p < 0.05$). Hence, H1 is supported. Attitude (H2) and Subjective Norms (H3) also have significant positive relationship with Intention toward Internet Ethics ($\beta = 0.210, p < 0.001$) and ($\beta = 0.561, p < 0.001$), respectively. However, Perceived Behaviour Control (H4) has a significant negative relationship with Intention toward Internet Ethics ($\beta = -0.157, p < 0.05$), which is opposite to the initial hypothesis. Apart from that, Perceived Usefulness (H2a + H2b) are positively related to Attitude ($\beta = 0.689, p < 0.001$) and Fear of Consequences (H4a + H4b + H4c) are positively related to Perceived Behaviour Control ($\beta = 0.523, p < 0.001$). The visual representation of the research model in this study is shown in Fig. 5.

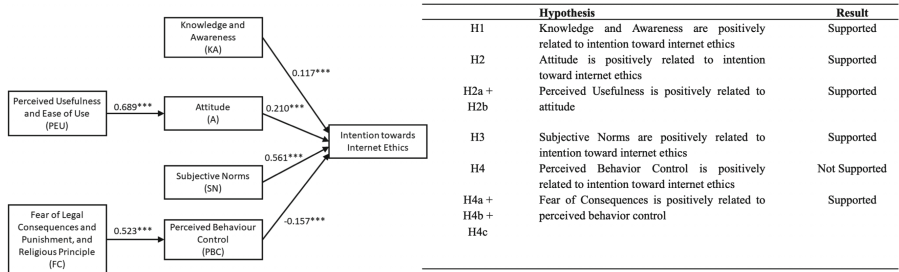


Fig. 5. Framework with standardized path coefficients and summary of the hypothesis

5 Discussion

The purpose of this study is to develop and validate a theoretical framework that can be used to evaluate students’ internet ethics. Compared to previous studies that focused on demographic characteristics [26, 27], this study focused on TPB and some ethics theories, and how they affect the students’ intention toward internet ethics. All except one of the hypotheses were supported, as shown in Fig. 5.

The findings suggest that knowledge and awareness have a positive influence on the intention toward internet ethics. Students who have more knowledge and awareness about internet ethics are inclined to perform internet ethical behaviour as compared to students without knowledge of internet ethics. Thus, the results are said to be in line with Deontology Theory. Similar results are found in previous studies [28, 29]. Some students violate rules and regulations due to a lack of ethical knowledge and awareness [30].

Aside from that, attitude toward ethical behaviour and subjective norms have a positive impact on internet ethics intention. Contrary, perceived behaviour control negatively influenced the intention of performing internet ethics, which is opposite to TPB. According to TPB, subjective norms, attitude, and perceived behaviour control are the primary factors influencing behavioural intention [31]. Many studies have found results that align with TPB [5, 32, 33]. However, there are a few studies that found a result opposite to TPB [34, 35]. Even if a person has control over their ethical behaviour, this does not guarantee that they will have the intention to practice internet ethics.

Moreover, perceived usefulness positively influences the attitude toward ethical behaviour. This result indicates that the attitude toward ethical behaviour among students increase when the students think that the internet resources are useful and easy to use to finish their assignment. Similar results are found in previous studies [36, 37]. In addition, establishing a ‘computer recess’ time for elementary school is recommended to make students more familiar with technology at an early stage [38]. Thus, making them aware of how to use the Internet properly. Besides that, the results show that fear of consequences (e.g., fear of punishment and religious principles) is positively related to perceived behaviour control. People do not commit unethical or illegal behaviour as they fear the legal consequences and the punishment, thereby complying with the Deterrence Theory. In this technology era, strict rules and regulations on computer and internet usage should be implemented to reduce unethical behaviour among students. The lack

of rules and regulations contributes to cyberbullying behaviour among students in Saudi [6]. The religious principle also has a role in affecting behaviour as well as shaping an individual's attitude [7].

6 Conclusion

The Internet is not merely a means of exchanging important information in today's world, but a significant platform that portrays a person's credibility; hence it is essential to be vigilant and safeguard in terms of ethical attitude. The important aspects are knowledge and awareness, attitude, perceived usefulness, subjective norms, and fear of consequences. It is a surprise to find that perceived behaviour control has no positive relation to intention toward internet ethics, which brought to the attention of the current Internet users being easily influenced to spread fake and viral news. Accordingly, this study suggests that education at a higher level should emphasise the internal and external influences on student internet ethics. There should be programmes implemented in Malaysian universities to increase students' Internet ethics knowledge, awareness, and behaviour. Rather than adding a new subject to this topic, digital literacy can be incorporated into existing subjects, such as information literacy, to improve them.

Nevertheless, further research could investigate this factor of behaviour control to see whether the results may differ across generations, religion and cultural beliefs, types of internet users, and/or environment. Apart from that, it is interesting to expand this current research to investigate Internet ethics among Malaysian students in relation to their personality traits. Personality traits might influence students' intention to use the Internet ethically.

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Perceptions of Incorporating Virtual Reality of Goggles in the Learning Management System in Developing Countries

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Abstract. This study investigates how virtual reality of Goggles (VRG) in improving the students' learning management system (LMS) acceptance through applying a cross-sectional design and used SEM and machine learning techniques to dig deep insights. Thus, it is found that VR Goggles significantly impact expectation confirmation and knowledge acquisition. Both expectation confirmation and knowledge acquisition also have a significant impact on students' motivations that is further leading to LMS acceptance. Behavioral intention was found partially mediated the students' motivation to accept LMS. The study concluded that incorporating technology in education is important to break barriers hampering the students' educational journey in the conventional learning system.

Keywords: Virtual reality · VR Goggles · LMS · Pakistan · eLearning · Technology in education

1 Introduction

eLearning is equally prevalent in developed and developing countries. Academics consider technology enhanced learning (TEL) as a substantial part of the young generation's educational journey and development. Further, students actively adopt eLearning due to its perceived ease of use and usefulness [1, 2]. With the widespread of Internet among instructors, students, and institutions worldwide, there has been an increased interest in using developed technological devices for educational purposes [3].

For example, Learning Management System (LMS) is considered an essential source of communication and education through the Internet in Pakistan. For teaching and communication, LMS offers brand integration, data migration, personalized learning

ability, intuitive user interface, and others [4]. Portable VRG has made their place in the educational sector and yielded positive impacts resulting in an enjoyable learning experience, motivated students, and enhanced learning capabilities [5]. VR technologies and portable headsets are being adopted and expected to have a significant impact in the near future, as more instructors become interested in using it in class to increase students' learning motivation and help them understanding the theoretical concepts [6].

Despite eLearning being considered sufficient, providing a real-time classroom environment was also important to make students feel their presence in a formal classroom environment. Little is known about the role of VRG in improving students' learning experience in the LMS, especially among Pakistani students. Thus, by considering the growing importance of the LMS and portable VR headsets, this study examines students' perceptions of this combination in relation to the LMS, using SEM technique to provide in-depth results on the relevant phenomenon.

2 Literature Review

2.1 VR Headset, Expectation Confirmation and Knowledge Acquisition

A portable virtual reality headset also known as "VR Goggles", head-worn apparatus that provides the users with improved 3D experiences. It is widely accepted and used by youngsters as they are self-contained, e.g., HTC Vive, Oculus, Samsun Gear, AR/VR headset, Google Cardboard etc. Whether it used on a PC or mobile, VRG use a specific combination of the proximity sensor, gyroscope, accelerometer, and magnetometer to detect the users' movements. Users are no longer required to visualize or experience watching just with a single lens internally. A simple VR headset serves many purposes: communication, entertainment, and education.

Even in a formal classroom, dictating and storytelling can be difficult for the students to comprehend [7]. However, with the VRG, learners can have both audio and video devices, which they can imitate and increase their creative writing skills accordingly. Further, [8] examined the importance of VRG in helping students of engineering to guide about creating digital circuits, their implementation, and logical application process. They found that students consider VRG beneficial technological advancements. More specifically, they help them to understand and practically adopt circuit construction and implementation skills that further fulfill the purpose of their education.

VR headset has a significant impact on **(H1a)** expectation confirmation and **(H1b)** knowledge acquisition.

2.2 Factors Accelerating VR Headset Adoption and Motivation

LMS is an organized platform adopted by most institutions worldwide due to its potential capabilities [9]. Institutional management designs, updates, monitor, evaluate, and sustain educational activities through LMS as the primary purpose is to ensure equal education for all. One of the prominent reasons behind LMS is increased accessibility regardless of any potential cultural or geographical barriers. Consequently, students

participate in teamwork-based projects, presentations, quizzes, and other activities that provide them experiences similar to a formal learning environment [10].

Incorporating VRG in eLearning enables the instructors to share the course material, help students practically demonstrate their learning skills, and perform well in class. Consequently, learners would enjoy the combination of VRG and LMS widely witness higher inspiration, commitment, and scholastic execution [11].

Motivation is significantly effected by (H2) expectation confirmation and (H3) knowledge acquisition.

H4: Motivation has a significant impact on LMS acceptance.

2.3 Impact of Behavior on LMS Acceptance

Motivation is the synonym for acceleration through emotions and rewards [12]. It is notable for instructors that although students would not be interested in learning as it is long and tedious, they may accept eLearning. eLearning enables learners and organizations to keep pace with the fast-changing technological, economic, and social trends [13]. Behavioral intention is mentioned as a factor to adopt and use the LMS among students [2, 14].

Behavioral Intention has a mediating impact on (H5a) motivation and (H5b) LMS acceptance (Fig. 1).

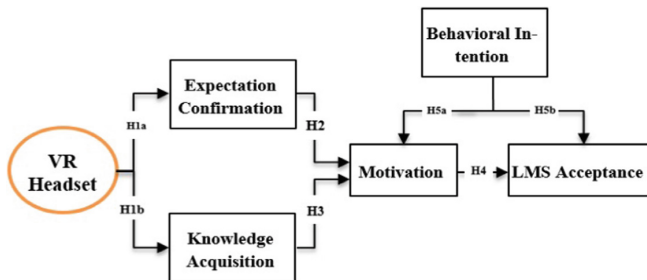


Fig. 1. The conceptual model

3 Research Methodology

3.1 Study Design and Data Gathering Tool

This study applied a cross-sectional design with close-ended questionnaires designed on 5-point Likert scale for data gathering purposes. The survey was sent through emails as the selected institutions were based on a distance learning system, having a recently implemented LMS during the Covid-19 pandemic. The SPSS and AMOS were used for data manipulation and analysis.

3.2 Study Sample

The study population involved all the universities with LMS in Pakistan. However, as per the sampling criteria, the study randomly selected two public sector universities placed in Islamabad, with a sample of n = 320 respondents using a convenience sampling technique. Notably, studies based on SEM consider a number of 200 respondents as the minimum sample size, see e.g., [15]. Moreover, the response rate remained 91.2%, as some questionnaires were either missing or wrongly filled.

4 Data Analysis and Results

4.1 Convergent Validity

As a primary requirement of the SEM, the study first assessed the internal consistency of the measurement model by applying the composite reliability (CR) and convergent validity (CV) assessments (Table 1).

Table 1. Convergent validity analysis

Variables	Items	FL	CA	AVE	CR
Virtual Reality Goggles	VRG1	.968	.951	1.28	.801
	VRG2	.957			
	VRG3	.930			
Expectation Confirmation	EXC1	.984	.938	1.43	.730
	EXC2	.892			
	EXC3	.798			
Knowledge Acquisition	KNA1	.984	.949	2.81	.882
	KNA2	.192			
	KNA3	.914			
Behavioral Intention	BHI1	.890	.930	.899	.750
	BHI2	.971			
	BHI3	.250			
Motivation	MOT1	.968	.951	2.23	.753
	MOT2	.957			
	MOT3	.930			
LMS Acceptance	LMS1	.797	.884	2.73	.796
	LMS2	.970			
	LMS3	.884			

Thus, all the Cronbach Alpha (CA) values range from .884 to .951, and the CR values range from .730 to .882, indicating that they sufficiently surpass the threshold value of

.7, as suggested by [16]. Further, factor loading (FL) values range from .890 to .984 and AVE values range from .899 to 2.81, surpassing the threshold value of .5, indicating that the measurement model in the current study is internally consistent.

4.2 Discriminant Validity

The study examined the discriminant validity using two criteria are essential to examine the discriminant validity [17]: The Heterotrait-Monotrait ratio and the Fornell-Larcker criterion (Table 2). All the squares of AVE values are higher than the correlation values. Regarding the Heterotrait-Monotrait ratio scale, the HTMT value at .621, lower than the threshold value of .85 [18]. Thus, the discriminant validity is also established.

Table 2. (a) Fornell-Larcker criterion. (b) Heterotrait-Monotrait ratio scale

	(a)						(b)				
	VRG	EXC	MOT	KNA	BHI	LMS	VRG	EXC	MOT	KNA	BHI
VRG	1.63										
EXC	.664	2.04					.494				
MOT	.708	.664	7.89				1.000	.494			
KNA	.755	.708	.755	.808			.616	.720	.616		
BHI	.762	.714	.762	.800	4.97		.561	.843	.561	.916	
LMS	.581	.545	.581	.620	.625	7.45	.510	.345	.510	.559	.594

4.3 Model Fit

The study further examined the Goodness of fit. It helps to examine the extent to which the observations accurately fit the data distribution [19]. Here, it revealed that the chisquare value at $\chi^2 = .0115$ (16), probability level at 0.001. Moreover, the standardized root means square value (RMSEA) remained at 0.711, lower than the threshold value of .9 as suggested by [20]. Thus, it is validated that the Goodness of fit is affirmed, and the model further provides the pathway to structural model assessment.

4.4 Coefficients of Determination R^2

To confirm the predictive power of the latent variables, coefficients of determination R^2 is considered a substantial part of SEM technique. It also helps to examine the extent to which the exogenous variables are causing variance in the endogenous variables [21]. R^2 values of all the endogenous variables range from .494 to .999, meaning all the variables have a fundamental strength or predictive power, and our exogenous variables strongly affect our endogenous variables.

4.5 Hypotheses Testing

The structural relationships between the exogenous and endogenous variables were examined using the path analysis (Table 3). The VRGs have a significant impact on EXC ($t = 7.543, p > 0.000$) and KNA ($t = 23.086, p > 0.000$). Moreover, results also revealed a significant impact of MOT on the EXC ($t = .776, p > 0.000$) and the KNA ($t = .550, p > 0.000$). The impact of MOT on the LMS acceptance also remained significant ($t = 15.075, p > 000$). Finally, the mediation analysis, as proposed in the H5, revealed a significant MOT impact of BHI on the motivation and LMS. Analysis revealed a partial mediation with the standard error value at 0.009.

Table 3. Hypotheses testing

Hyp	Relationship	Path	t-value
H1a	VRG=>EXC	.720	7.543***
H1b	VRG=>KNA	.982	23.086***
H2	EXC=>MOT	.776	25.725***
H3	KNA=>MOT	.550	19.360***
H4	MOT=>LMS	.420	15.075***
Hyp	Relationship	Path	Indirect Effects
H5a,b	MOT=>BHI=>LMS	.454	.267***

5 Discussion and Conclusion

This study explores students’ perceptions of VR technology and VRG, mainly accepting and adopting LMS. Results indicated a mutual consensus of respondents regarding the positive role of VRG in LMS acceptance [14]. The first proposed relationships between VR headset and EXC/KNA (H1) remained significant. Affirmation of both relationships indicates consistency with previous studies conducted by [22] and [8]. Both studies found VRG to offer a real-time, face-to-face learning environment fulfilling the students’ educational needs.

Moreover, the H2 & 3 assumed a significant impact of EXC/KNA on MOT. These results are consistent with the existing studies [10] and [11]. Further, the H4 assumed that motivation is an important component of technology that further increases learners’ interest and motivates them towards adoption for improved learning experiences [11, 23–25]. Most participants also agreed that VRGs are new to them. Yet, their wider availability at an affordable price motivates them to use it [26].

Finally, H5 assumed a mediating impact of BHI on MOT to accept the LMS. The relevant hypothesis remained significant. Behavioral intention is one of those attitudinal factors that actively help an individual adopt the LMS [14]. Notably, the positive behavior leads to instant technology adoption and usage.

This research assessed the perceptions of Pakistani students regarding the role of VRGs in increasing their LMS acceptance. Despite technology adoption for educational purposes has remained slow in Pakistan, the current era, especially the Covid-19 pandemic, shifted the conventional educational system to the eLearning system. Nonetheless, the impression about VRG is their attribution to entertainment purposes is limited. It is not only broadened by the current study but also reflects the maturity of the young generation towards considering and using VR technology, including education. As a result, VR technology is rooted in education to which students are acquiring as many benefits as they can. The quality of education in Pakistan and worldwide has increased, where accessibility is not a question anymore.

5.1 Study Limitations and Recommendations

This study contains some limitations. First, the geographical consideration is one of the prominent limitations, the applicability of the results elsewhere is questionable. Second, only two public sector universities were examined, whereas increasing the number of institutions could have brought in-depth results. Finally, the data gathering only from the students, while involving teachers could highlight some more profound insights.

Thus, more studies are needed to examine other learners' /instructors' perceptions about a rapid transition from conventional to contemporary learning environments.

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