

Eurasian Studies in Business and Economics 20
Series Editors: Mehmet Huseyin Bilgin · Hakan Danis

Mehmet Huseyin Bilgin
Hakan Danis
Ender Demir
Gokhan Karabulut *Editors*

Eurasian Business and Economics Perspectives

Proceedings of the 33rd Eurasia
Business and Economics Society
Conference



 Springer

Eurasian Studies in Business and Economics 20

Series Editors

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Editors

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and Economics Society Conference

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Preface

This is the 20th issue of the Springer's series **Eurasian Studies in Business and Economics**, which is the official book series of the Eurasia Business and Economics Society (EBES, www.ebesweb.org). This issue includes selected papers presented at the 33rd EBES Conference - Madrid that was held on October 7–9, 2020. The conference was jointly organized with the *Faculty of Economics and Business, UNED* with the support of the *Istanbul Economic Research Association*. Due to the COVID-19 pandemic, the conference presentation mode has been switched to “online/virtual presentation only.”

We are honored to have received top-tier papers from distinguished scholars from all over the world. We regret that we were unable to accept more papers. In the conference, 164 papers were presented and 338 colleagues from 48 countries attended the online conference. **Jonathan Batten** from RMIT University, Australia; **Klaus F. Zimmermann** from EBES, GLO, UNU-MERIT and Maastricht University, the Netherlands; and **Marco Vivarelli** from Università Cattolica del Sacro Cuore in Milano, Italy, joined the “Editor’s Panel Session” on “How to publish in WoS journals.” Moreover, we organized the “Keynote Session” entitled “*Global Financial Sector in the Post COVID-19 area*” with **Steven Ongena**, University of Zurich, Switzerland; **José María Labeaga** from National Distance Education University (UNED), Spain; **Ricardo Gimeno** from the Banco de España, Spain; **M. Kabir Hassan** from the University of New Orleans, USA; and **Amine Tarazi** from Université de Limoges, LAPE, France.

In addition to publication opportunities in EBES journals (*Eurasian Business Review* and *Eurasian Economic Review*, which are also published by Springer), conference participants were given the opportunity to submit their full papers for this issue. Theoretical and empirical papers in the series cover diverse areas of business, economics, and finance from many different countries, providing a valuable opportunity to researchers, professionals, and students to catch up with the most recent studies in a diverse set of fields across many countries and regions.

The aim of the EBES conferences is to bring together scientists from business, finance, and economics fields, attract original research papers, and provide them

with publication opportunities. Each issue of *the Eurasian Studies in Business and Economics* covers a wide variety of topics from business and economics and provides empirical results from many different countries and regions that are less investigated in the existing literature. All accepted papers for the issue went through a peer review process and benefited from the comments made during the conference as well. The current issue is entitled *Eurasian Business and Economics Perspectives* and covers fields such as human resources management, management, marketing, finance, and regional studies.

Although the papers in this issue may provide empirical results for a specific county or regions, we believe that the readers would have an opportunity to catch up with the most recent studies in a diverse set of fields across many countries and regions and empirical support for the existing literature. In addition, the findings from these papers could be valid for similar economies or regions.

On behalf of the series editors, volume editors, and EBES officers, I would like to thank all the presenters, participants, board members, and keynote speakers, and we are looking forward to seeing you at the upcoming EBES conferences.

Best regards

Istanbul, Turkey

Ender Demir

Eurasia Business and Economics Society (EBES)

EBES is a scholarly association for scholars involved in the practice and study of economics, finance, and business worldwide. EBES was founded in 2008 with the purpose of not only promoting academic research in the field of business and economics but also encouraging the intellectual development of scholars. In spite of the term “Eurasia,” the scope should be understood in its broadest terms as having a global emphasis.

EBES aims to bring worldwide researchers and professionals together through organizing conferences and publishing academic journals and increase economics, finance, and business knowledge through academic discussions. Any scholar or professional interested in economics, finance, and business is welcome to attend EBES conferences. Since our first conference in 2009, around 13,749 colleagues from 99 countries have joined our conferences and 7729 academic papers have been presented. **EBES has reached 2541 members from 87 countries.**

Since 2011, EBES has been publishing two journals. One of those journals, *Eurasian Business Review—EABR*, is in the fields of industrial organization, innovation, and management science, and the other one, *Eurasian Economic Review—EAER*, is in the fields of applied macroeconomics and finance. Both journals are published quarterly by *Springer* and indexed in *Scopus*. In addition, EAER is indexed in the *Emerging Sources Citation Index (Clarivate Analytics)*, and EABR is indexed in the *Social Science Citation Index (SSCI)* with an impact factor of 3.5 as of 2020.

Furthermore, since 2014 Springer has started to publish a new conference proceedings series (**Eurasian Studies in Business and Economics**) which includes selected papers from the EBES conferences. The series has been indexed by **SCOPUS**. In addition, the 10th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 20th (Vol. 2), 21st, and 24th EBES Conference Proceedings have already been accepted for inclusion in the *Conference Proceedings Citation Index—Social Science & Humanities (CPCI-SSH)*. Other conference proceedings are in progress.

We look forward to seeing you at our forthcoming conferences. We very much welcome your comments and suggestions in order to improve our future events. Our success is only possible with your valuable feedback and support!

With my very best wishes,

Klaus F. Zimmermann
President

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Part I
Eurasian Business Perspectives: Human
Resources Management

A Qualitative Study of Factors Influencing Employee Ecological Behavior of Academics in Higher Education



Mohd Yusoff Yusliza, Zikri Muhammad, Khalid Farooq,
Wan Zulkiffi Wan Kassim, and Muhamad Khalil Omar

Abstract Employee ecological behavior (EEB) of academics has emerged as the most crucial factor for facilitating universities to move towards being low-carbon campuses. The purpose of this study was to determine how EEB is influenced by other factors so as to enhance academics' environmentally friendly behavior at Malaysian universities for sustainability. The study used the qualitative method. Data were collected through semi-structured face-to-face interviews with focus group academics of Malaysian top four universities. Based on the themes observed from the interview transcripts, the factors influencing EEB of academics were organizational factors (green top management support and green organizational climate), environmental factors (environmental knowledge, environmental attitude, environmental consciousness, and environmental awareness) and individual factors (green mindfulness and green self-efficacy). The scope of this study was limited to public research universities in Malaysia. Future studies may explore other variables that may further influence EEB. The study's findings may form the basis for drafting policies that will help enhance academics' environmentally friendly behavior. Research on EEB in Malaysia has been very limited. This study contributes to the current literature by providing a discussion on how academics' EEB is influenced by environmental, organizational, and individual factors. High academics' EEB will facilitate universities to become more sustainable and environmentally friendly.

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Keywords Universities · Employee ecological behavior · Organizational factors · Environmental factors · Individual factors · Malaysia

1 Introduction

Today's environmental degradation has been caused by various factors, including natural disaster, climate change, and depletion of natural resources through human activities, such as excessive cutting of trees (Rezai et al., 2016). To mitigate the problem, many countries and organizations have pledged to different global movements and implemented policies to encourage environmentally friendly behavior. For example, Malaysia, through its 11th and 12th national plans, has joined the global initiatives to become more sustainable (Sim & Putuhena, 2015). Promoting a green culture and employee behaviors that eliminate or reduce harm to the environment have been shown to be beneficial for organizations and essential for societies (Rayner & Morgan, 2017). These initiatives include reduction of carbon emission, usage of electricity, office materials, and appropriate recycling (Fawehinmi et al., 2020). When employees' environmental competencies are enhanced, there will be a higher likelihood of organizations achieving environmental performance (Dumont et al., 2017; Fawehinmi et al., 2020; Leidner et al., 2019).

One of the contributors to environmental degradation is higher education institutions. Most of these institutions are being operated as business organizations or as "small cities," with large and various complex activities taking place in their campuses, creating serious direct and indirect impacts on the environment (Alshuwaikhat & Abubakar, 2008). For example, the use of the large network of transportations, extensive energy, different chemicals in the laboratories, and the large quantity of paper, coupled with improper waste disposal and water supply circulation, has led to an alarming rise in carbon emission (Yañez et al., 2020). At the same time, higher education institutions have the responsibility of shaping the nations (Lozano, 2006), training the next generation's leaders, decision-makers, and managers (Alshuwaikhat & Abubakar, 2008). As such, it is important for the institutions to integrate sustainability (Yuriev et al., 2020) and move towards being low-carbon campuses. Achieving this goal of low-carbon emission and proper utilization of resources requires a high level of employee ecological behavior (EEB) among their employees, especially the academics (Fawehinmi et al., 2020). EEB refers to a set of behaviors that support the protection and management of environmental initiatives (Zhang et al., 2019). Examples of these behaviors include double-side printing, recycling, and turning off the lights (Fawehinmi et al., 2020; Yuriev et al., 2020). There are different levels of EEB at the workplace, which may be in-role or extra-role behavior (Dumont et al., 2017). These maybe shaped by several factors, including organizations' sustainability policies (Norton et al., 2014).

Due to their inefficient environmental performances, higher education institutions have begun to shift their focus away from recycling and upgrading their technological advancement towards employees' behavioral change (Anwar et al., 2020). In

addition, Cho (2019) has argued for the need to investigate the EEB of academics. However, despite the awareness of the importance of EEB in the achievement of the institutions' environmental performance, research on the factors influencing EEB has been very little. Furthermore, to the best of our knowledge, studies that examined the antecedents of EEB of academics in Malaysian higher education have not yet been conducted. Therefore, the purpose of this study was to determine the factors that influence EEB of academics in Malaysian higher education.

This study advanced the knowledge of EEB in threefold. First, the study extended the understanding of how different factors may influence EEB. Secondly, the study filled the gap by investigating the impact of individuals' capabilities to perform EEB. For example, employees with more green self-efficacy will be more likely to involve themselves in EEB, as suggested by Kim et al. (2019). As for higher education institutions, by focusing on the green self-efficacy of their academics, they may be able to set up more acceptable practices for green behaviors. Thirdly, the study focused on green behavior at workplace, which added new knowledge about academics' green behaviors at higher education institutions. This concept has long been suggested for further attention (Anwar et al., 2020; Fawehinmi et al., 2020).

The remaining sections of the paper comprise of literature review of studies related to the EEB, and their relationship with organizational, environmental and individual factors. The literature review will be followed by the theoretical background of the study. After that, in the methodology section, the research method and sample and data collection, and data analysis has been discussed. After the discussion on methodology, the results of the analysis are presented and interpreted in the next section. Implications, research limitations, future research directions, and conclusions are summarized subsequently.

2 Literature Review

2.1 *Employee Ecological Behavior*

Employee ecological behavior (EEB) is defined as “scalable actions and behaviors that employees engage in, or bring about, that are linked with, and contribute to, environmental sustainability” (Ones & Dilchert, 2012, p. 456). Such behaviors are considered as secondary to work and require motivational factors to trigger (Norton et al., 2014). Work-related green behavior differs from general pro-environmental behavior, which is mostly considered as general behavior or behavior at home (Stern, 2000). Norton et al. (2015) divide EEB into two categories, namely required EEB and voluntary EEB. Required EEB refers to the behavior performed by employees as part of job duties, which require completion similar to task performance. Voluntary EEB is related to exceeding organizational expectations and is similar to organizational citizenship behavior for the environment (Norton et al., 2015). Factors influencing EEB in the workplace have not been extensively studied (Dumont et al., 2017; Fawehinmi et al., 2020; Kim et al., 2019; Norton et al., 2015).

Individuals' green behavior at work may differ from their green behavior at home, so the antecedents of their environmental behaviors at work and at home maybe different (Davis et al., 2019). This means that factors that influence their green behaviors at home may be not effective at the workplace (Kim et al., 2014). Furthermore, research on EEB has mostly focused on the organizational level factor (Dumont et al., 2017; Fawehinmi et al., 2020). Dumont et al. (2017) have argued that factors of EEB should be examined at both individual and organizational levels.

2.2 Environmental Factors That Influence EEB

2.2.1 Environmental Attitude

Attitude is linked with individuals' decision-making process and also their behavior (Ajzen, 1991; Lin, 2013). Environmental attitude of individuals is one of the factors that influence their green intentions or environmental activities (Han et al., 2019). Individuals with pro-environmental attitude are more likely to practice green behavior and are willing to accept possible inconveniences related to the green behavior (Mi et al., 2019).

2.2.2 Environmental Awareness

Humans are inherently always aware of the environment (Kollmuss & Agyeman, 2002). Environmental awareness can be defined as the capability of individuals to integrate sensation from the environment and its problems with targeted goals in order to be environmentally friendly (Fu et al., 2020). Various studies have found positive relationships between environmental awareness and green behaviors (Kikuchi-Uehara et al., 2016; Lillemo, 2014; Ozaki & Sevastyanova, 2011).

2.2.3 Environmental Knowledge

Environmental knowledge refers to the factual information that an individual has about the ecology of the planet and the effects of human activities on the environment (Arcury & Johnson, 1987) and the solutions for the environmental problems (Vicente-Molina et al., 2018). Arcury and Johnson (1987) argued that environmental knowledge and environmental knowing are two different domains or cognitions. Environmental knowing is how individuals learn about and perceive the environment, while environmental knowledge is factual information individuals have that influences their actions (Zareie & Navimipour, 2016). A number of studies found that individuals with greater environmental knowledge showed more commitment towards green behavior (Carmi et al., 2015; Ellen, 1994; Fawehinmi et al., 2020;

Fryxell & Lo, 2003; Fu et al., 2020; Mostafa, 2007; Safari et al., 2018; Taufique et al., 2016; Vicente-Molina et al., 2013).

2.2.4 Environmental Consciousness

The environmental consciousness of individuals is considered the most important factor that motivates them to be environmentally friendly (Cheema et al., 2020). Individuals with high concern about the environment are willing to engage in extra efforts to protect it (Mancha & Yoder, 2015). Fraj and Martinez (2006) argued that when individuals are conscious of the consequences of their actions and behaviors, they will be more willing to adopt green behaviors.

2.3 Organizational Factors That Influence EEB

2.3.1 Green Top Management Support

Top management supports in terms of commitment towards green sustainability help organizations develop and implement sustainable practices (Hoejmosse et al., 2012; Dubey et al., 2016; Blome et al., 2014). The absence of top management support for sustainability creates difficulties in adopting green practices and sustainability in organizations (Gupta, 2018). When top management and employees collaborate for sustainability, EEB and practices increase (Burki et al., 2019; Kim et al., 2019). In addition, Graves et al. (2019) also discovered the influential role of top management support in influencing the EEB. As Rubel et al. (2018) argued, line managers relate their trust in management more with their in-role performance.

2.3.2 Green Organizational Climate

The climate of an organization is a shared perception of employees involving the work environment, and this climate influences the employees to behave accordingly (James et al., 2008). Organizational climate and organizational culture overlap up to some extent, but they both have different meanings (Chou, 2014). Organizational climate is the shared perception of an individual's interpretation of the implications and significance of certain aspects in the work environment, while organizational culture is the normative belief and systematic behavioral expectations designed by the organizations (James et al., 2008).

2.4 Individual Factors That Influence EEB

2.4.1 Green Mindfulness

Mindfulness is an individual's state of mind that focuses attention to the present moment and develops a non-judgmental awareness of the moment through feelings and actions (Hwang & Lee, 2019). It develops self-awareness, positive interpersonal relationships, and self-regulations that increase positive behavior (Chiesi et al., 2017). Green mindfulness refers to the environmental well beings of individuals that allow them to support green creativity and initiatives (Bahl et al., 2016; Ndubisi & Al-Shuridah, 2019). Dharmesti et al. (2020) found a positive relationship between green mindfulness and pro-environmental behavior.

2.4.2 Green Self-Efficacy

Self-efficacy is individuals' belief about their capabilities to produce the designated level of performance (Lim et al., 2018). Green self-efficacy is more related to individuals' belief about their capabilities to perform environmental practices (Lauren et al., 2016). Individuals who have a strong belief about their environmental protection capabilities will exert more effort to carry out appropriate behavior for the conservation of natural resources (Lim et al., 2018). Kim et al. (2016) found a positive relationship between self-efficacy and pro-environmental behavior.

3 Theoretical Background

The theoretical foundation referenced in this study was the social identity theory. Social identity theory posits that people are happy and affirmative when they attach themselves to teams and groups which have positive standings. This sense of belonging helps to reinforce their self-concept of association with groups. The theory helps to explain the relationship between organizations and their employees (Ashforth & Mael, 1989). Studies have found that employees who are integrated with organizations' positive activities and values tend to show strong organizational commitment (Scott, 2007; Su & Swanson, 2019). Employees who have a positive perception of organizations' environmental strategies tend to exhibit high level of eco-friendly behavior (Kim et al., 2019). Studies have confirmed that employees who are more environmentally conscious and identify their employers' efforts towards environmental sustainability are more inclined to be especially engaged in green behavior (Chaudhary, 2019; Kim et al., 2019).

4 Methods

4.1 Research Method and Sample

This study employed the qualitative research method where focus group discussions were conducted. The qualitative method was suitable due to the nature of the study that aimed to determine the factors that influence the EEB of academics based on their own perceptions (Jabbour et al., 2020; Okereke & Kung, 2013). Moreover, as argued by Jabbour et al. (2020) the qualitative method is appropriate for finding the nuances in the respondents' answers.

Respondents were academics from four universities in Malaysia. These universities are highly involved in low-carbon emission practices. They are recognized for their sustainability and low-carbon emission efforts, as evidenced by their green metrics ranking and ISO certification. These universities were selected out of all Malaysian universities based on their green metrics ranking. Another reason for their selection was that they are receiving national attention and under pressure from the stakeholders to increase environmental sustainability (Yang et al., 2020).

The study's sample included 16 faculty members. No specific criterion exists to determine appropriate sample size in qualitative research; size depends on resource availability, time, and objectives (Malhotra & Dash, 2016; Patton, 2002). Adler and Adler (2012) suggested a sample size of 12, as did Guest et al. (2006). Saunders et al. (2003) found that the sample size's acceptable range in semi-structured interviews was between 5 and 25. However, the actual sample size is based on the point of saturation, which happens when no new information or themes are found in the data (Hastings & Perry, 2000).

4.2 Data Collection

Data were collected between July to December 2020 through interviews with the respondents. The discussions were based on an interview guide with several questions based on the literature search. The questions consisted of 37 questions, divided into eight sections. Questions in the first section were related to respondent's personal information. Each respondent was presented with the interview protocol that had been approved by the ethics committee of the lead researcher's university. The document ensured the anonymity of all participants. Respondents were asked to describe their role and work routine and their awareness about environmental issues and universities' green initiatives. Prior to starting the interview, the interviewers went through the interview protocol with the respondents, answered their queries about the interview questions and the study, and ensured their understanding of the study's scope. The respondents were asked to describe some pro-environmental behaviors at the workplace (e.g., double-sided printing, turning off the air-conditioners, recycling, switching off lights and computers, saving water, and efficient food consumption). The duration of each interview was between 60 and 90 minutes. The interviews were recorded.

4.3 Data Analysis

The recorded interviews were transcribed in full. The transcripts were analyzed using content analysis, a method defined as a “research method for subjective interpretation of the content of text data through the systematic process of coding and identifying themes of patterns” (Shannon, 2005, p. 1278). The analysis consisted of two steps. First, relevant passages were analyzed and categorized into three meta types—Individual, Organizational, and Environmental—as suggested in the research framework. Then, these passages were further analyzed to identify the themes that emerged with regards to the factors that influence their EEB.

5 Results

5.1 Overview

The content analysis of the data produced eight themes considered as factors that influence the EEB of the academics. Four of these themes were categorized under the environmental factor, namely *environmental attitude*, *environmental awareness*, *environmental knowledge*, and *environmental consciousness*. Two were categorized under the organizational factor, and these themes were *green top management* and *green organizational climate*. The last two themes were categorized under the individual factor, and they were *green mindfulness* and *green self-efficacy* (Table 1).

Table 1 Participants demographics profile

University	Participant Number	Gender
University A	1	Male
	2	Female
	3	Female
	4	Female
	5	Male
University B	1	Female
	2	Male
	3	Male
University C	1	Male
	2	Female
	3	Male
University D	1	Male
	2	Female
	3	Female
	4	Male
	5	Male

Source: Authors’ own work

5.2 Environmental Factors That Influence EEB

5.2.1 Environmental Attitude

There was a consensus among most respondents that environmental attitude influences their EEB. They agreed that one should have the attitude to preserve the environment in order to develop environmentally friendly behavior.

One of the respondents said:

I look at my seniors, after they came back from Japan, their attitude totally changed. One example is regarding throwing the rubbish. In my house, there are different types of dustbin. About the attitude and mind-set in other countries, I think I will apply them in Malaysia. (Respondent 1, University A).

Another respondent said:

The attitude of course. Even though you have the awareness, if you don't want to be responsible, of course you will not do it. (Respondent 3, University B).

5.2.2 Environmental Awareness

Environmental awareness as a factor influencing the academics' EEB emerged from the interviews where the majority of the respondents described in some way the importance of environmental awareness.

A respondent said:

We focus on awareness, so we encourage people to bring the Tupperware containers. (Respondent 7, University C).

There were also some remarks about how being environmentally aware has steered the respondents towards being environmentally friendly. A respondent said:

I'm not sure whether it is because of the level of my knowledge or the level of my education . . . but my awareness towards the environment is there. (Respondent 3, University B).

Another respondent remarked:

As for me, even before I went overseas, the awareness already existed. I practice in addition to recycling. (Respondent 9, University D).

5.2.3 Environmental Knowledge

Another theme identified as being the factor that influences the EEB of academics is environmental knowledge. There was an agreement that having such knowledge is very important. In addition, it was accepted that employees with greater knowledge related to the environment show more environmentally friendly behaviors.

One respondent said:

I think having enough knowledge is very important. (Respondent 1, University A).

Another respondent talked about the need to disseminate knowledge related to the environment:

As a teacher, what we can do is giving them the knowledge, like throwing the rubbish properly. (Respondent 13, University B).

5.2.4 Environmental Consciousness

Consciousness towards environmental issues emerged as one of the factors, as most respondents expressed agreement about its importance.

One respondent remarked:

I think . . . what is important is the consciousness. We might be able to do that. It is also related to discipline. If you don't have a consciousness or discipline, you might not be able to do those things. In our daily life, we must have consciousness. (Respondent 4, University A).

Another respondent restated the importance of environmental consciousness:

How we use the computer, the lights depends on the level of our environmental consciousness. Being energy-friendly or environmental-friendly firstly depends on our level of environmental consciousness. (Respondent 15, University A).

A respondent who happened to hold the post of director of a sustainability centre at one of the institutions remarked about having to be conscious environmentally so as to be exemplary:

I have to set an example for everybody in the university. . . I have to be conscious about something being environmentally friendly or not. I have to consider everything in what I do. (Respondent 18, University B).

5.3 Organizational Factors That Influence EEB

5.3.1 Green Top Management

Analysis of the data also revealed that the respondents believe top management plays a role in influencing the academics' EEB.

One respondent said:

I think the top management is the one that can play the role. (Respondent 6, University B).

Another respondent also agreed:

I think with the support from top management, and they really want to see the impact, those things can be implemented. (Respondent 5, University B).

One respondent believed that if something is issued from the top, the employees below will be obliged to follow:

From what I understand, it is actually from the top management. When top people issue directives, automatically we will practise them. (Respondent 10, University D).

5.3.2 Green Organizational Climate

There was a consensus that organizational green climate may influence the EEB of academics. Respondents shared their views regarding the need for the institutions to create a positive climate that channels the academics towards being more environmentally friendly. This climate can be nurtured through campaigns, standard practices, and programs. A respondent shared about what has been established at one of the institutions:

Mangrove Talk is about the environment. But more on the general aspect. We also have held talks about climate, sustainability issues, and solid waste. We have a sustainability science course. (Respondent 4, University A).

5.4 Individual Level Factors That Influence EEB

5.4.1 Green Mindfulness

Green mindfulness emerged as an important antecedent of EEB. Respondents agreed that being mindful regarding the environment increases individuals' awareness of the environment. In turn, they will more likely be involved in green behavior. Discussion centered around the need to instill green mindfulness at a young age. One respondent remarked:

I think these factors come from home, and then our children will learn from that. My children are mindful of these things especially rubbish. My children also said we eat whatever on the plate. Don't waste it. (Respondent 6, University B).

5.4.2 Green Self-Efficacy

Green self-efficacy was discussed as one of the factors influencing the EEB of academics. It was agreed that those with high green self-efficacy are more likely to engage in environmentally friendly behavior. One respondent said:

You can't say that it is the university's responsibility as well. If the individuals are aware and realize what they are doing, they can be responsible for their own actions. You can enforce all you want, but if people do not want to follow, they will not do so. (Respondent 18, University B).

6 Discussion

The purpose of the study was to identify the factors that influence the EEB of academics in Malaysian higher education institutions. The results showed that the EEB could be influenced by eight factors, four under the environmental category

(environmental attitude, environmental awareness, environmental knowledge, environmental consciousness), two under the organizational category (green top management, organizational green climate), and two under the individual category (green mindfulness, green self-efficacy).

Most respondents were of the view that environmental attitude influences their EEB. They agreed that a positive attitude towards the environment helps to develop environmentally friendly behavior. This concurs well with the fact that attitude is the precursor to individuals' decision-making process and behavior, as posited by Ajzen (1991) and Lin (2013). The majority of the respondents believed that environmental awareness is a factor influencing their EEB. They agreed that being aware of what is happening to the environment in terms of environmental problems may influence them to be more pro-environmental at the workplace. The result was in line with those from other studies where a positive relationship between environmental awareness and green behavior was established (Kikuchi-Uehara et al., 2016; Lillemo, 2014; Ozaki & Sevastyanova, 2011). Another theme considered as being the factor that influences the EEB of academics is environmental knowledge. The respondents agreed that having such knowledge is very important. In addition, they concurred that employees with greater knowledge related to the environment show more environmentally friendly behaviors. The result was similar to those in earlier studies where it was found that individuals with greater knowledge of the environment had more tendency to engage in green behavior (Carmi et al., 2015; Ellen, 1994; Fawehinmi et al., 2020; Fryxell & Lo, 2003; Fu et al., 2020; Mostafa, 2007; Safari et al., 2018; Taufique et al., 2016; Vicente-Molina et al., 2013). The result also showed that consciousness towards environmental issues is one of the factors shaping academics' EEB. Most respondents expressed agreement about the importance of environmental consciousness. The positive relationship between being conscious of the environment and engaging in environmentally friendly behavior is explained by Mancha and Yoder (2015), who stated that individuals who have a high concern regarding the environment are willing to do whatever is necessary to protect it.

From the analysis of the data, it was found that the respondents believe top management plays a role in influencing the academics' EEB. As explained by Kim et al. (2019), when employees receive consistent messages regarding green behavior from the top management, they feel triggered to practice environmentally friendly behavior. The result was in line with that of Graves et al., (2019), who found the influential role of top management in developing EEB. Organizational climate is also considered as one of the influencing factors for EEB. As maintained by James et al. (2008), when the climate is more towards attaining sustainability and being environmentally friendly, there is a higher chance of employees being influenced by it and thus being more willing to engage in green behavior.

At the individual level, academics' EEB can be influenced by two factors, namely green mindfulness and green self-efficacy. The result was similar to that of Dharmesti et al. (2020), who found a positive relationship between green mindfulness and pro-environmental behavior. In addition, the emergence of green self-efficacy as a factor affecting the EEB of academics was not unexpected, as earlier

studies by Kim et al. (2016) and Lauren et al. (2016) also found a positive relationship between green self-efficacy and pro-environmental behavior.

7 Implications

7.1 Theoretical Implications

Through addressing a call for research by Dumont et al., (2017), the current study contributed to the literature on EEB and on strategies for enhancing EEB by adding new information on the factors that influence the EEB of academics in Malaysian higher education institutions, from the aspects of individual, organizations, and environment. This information will be useful for institutions in their endeavor to establish a managerial framework for ensuring that their employees, especially the academics, can assist them in meeting the challenges of being low-carbon campuses. In addition, this study helped build a new construct by addressing Norton et al. (2015) recommendation to investigate how organizational factors influence EEB. The study also enhanced the literature by examining the effect of self-efficacy on EEB. Furthermore, the study broadened the understanding of how institutions can strategically manage their carbon footprint by focusing on improving the EEB of their academics.

7.2 Practical Implications

The current study provides insights to the managements at Malaysian higher education institutions regarding the factors that influence the EEB of their academics. This information is useful in the context of the institutions' aims of being low-carbon campuses. As academics are the main instruments for achieving the goal, this information may help institutions to utilize their organizational capabilities effectively to identify strategies for further developing the academics' EEB. The study also highlighted the roles of green top management, environmental knowledge, and environmental awareness towards ensuring the achievement of the goal of low-carbon emission. In this regard, findings from the study may be used by Malaysian higher education institutions as supports when dealing with policymakers and government institutions to mitigate environmental degradations.

8 Research Limitations

This study has some limitations. First, the factors, in many cases, were not singled out by interviewees for specific EEB. Secondly, the results were interpreted inductively, and the information collected from the academics was related to the relevant literature. Thirdly, the study was conducted in the specific national context, with data collected from four large public universities in Malaysia. Hence, the results are not generalizable to other contexts due to possible cultural differences. Lastly, data were collected through interviews and focused group discussion; as EEB is a new concept, some academics might have different interpretations of it.

9 Future Research

Future research may build on the current one, with the scope broadened to include more respondents from other higher education institutions and possibly those in different contexts. Future studies should conduct empirical research on the individual, organizational, and environmental factors. Further qualitative studies may be conducted that focus on sustainability (Yong et al., 2020) and competitive advantage (Norton et al., 2015) of EEB of academics in low-carbon institutions as a way to increase the motivation to aim for the green campus.

10 Conclusion

The main objective of this study was to analyze the factors that influence green behaviors among employees. This study extended the current state of knowledge of EEB by investigating the factors that influence the EEB of academics in Malaysian higher education institutions. A qualitative study was carried out through semi-structured interviews and focus groups with the aim to explore the interactions between the factors in influencing EEB in the workplace. From the results, the EEB of academics is influenced by seven elements (environmental attitude, environmental awareness, environmental knowledge, environmental consciousness, green top management, organizational green climate, green mindfulness, and green self-efficacy) that can be categorized into environmental, individual, and organizational. Results highlight a series of important conclusions for both researchers and practitioners striving to understand better how to promote EEB in the workplace. The findings of the current study are important to suggest to future researchers to develop and implement measures that could incite employees to practice green behaviors more frequently. Additionally, the study suggests future research to enrich the literature on EEB among academicians with further investigation of the precise mechanisms governing the relationship between various factors that influence EEB.

We urge future researchers to use quantitative and mixed-method design to apply and study how the elements of our findings that can relate to EEB.

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Leadership in Various Project Management Methodologies



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Abstract The aim of this research is to describe the approach to leadership competences in various methodologies. Identifying the similarities and differences between the approach to leadership in different methodologies, as well as highlighting the competences of the leader that are most important in each of them. The data for the research was obtained from the documents of selected, the most recognized associations and project management organizations, which include: Project Management Institute (PMI), International Project Management Association (IPMA), Scrum.org, and The Agile Alliance. The desk research method was used in the work, which enabled the compilation, analysis, and processing of the obtained data, and then formulating conclusions based on them. The findings show that all analyzed methodologies present their own set of competencies of an ideal leader, but communication competences related to building relationships and cooperation with team members turned out to be the most important ones. The comparison of selected methodologies made it possible to show that they are very similar, but not identical. Each methodology adds a unique element to leadership pattern which distinguishes it from the others. All the conclusions obtained constitute useful hints in achieving the goals set by the project managers.

Keywords Leadership · Management · Project · Methodology · Competences · Project manager

1 Introduction

The ongoing dynamic changes in the environment draw constant interest in the issues of leadership and its great importance for management science. To be successful in leading a new, complex economic environment, a project manager

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must continuously acquire the necessary leadership competences. These can be used to solve emerging problems and achieve complex goals, which in turn have influence on the success of the project.

Nowadays, in a maze of information, it is difficult to decide which approach, advice, and tips are most valuable. There are many organizations, associations, and companies dealing with consulting, training, and certification of project managers on the market. They use different methodologies according to the expectations and needs of their clients. However, it is up to the project manager to decide according to which methodology he will manage his project, and therefore according to which he will develop his leadership competencies. Project managers can learn about methodologies from literature, the Internet, or from other project managers. As a rule, however, all these data focus on one selected methodology, without looking at it from a broader perspective, in terms of their similarities and differences. There is no comparative analysis of the various methodologies that would allow the project manager to select the most appropriate one for the development of his leadership competencies.

There are many theoretical and empirical works on leadership in the literature, including those which emphasize its role as one of the success factors in project management (e.g., Alvesson et al., 2008; Ashforth et al., 2011; Ashforth & Schinoff, 2016; Collinson, 2003; Fiol et al., 2009; Petriglieri, 2011). Researchers note that leadership skills give a project manager a significant advantage over others and increase the effectiveness of project teams (Harper-Smith & Derry, 2009). McManus (2006) emphasizes that leadership will become the main engine of the economy of the twenty-first century. The results obtained in the article will allow to enrich the currently published papers with the analysis of project management methodology in the aspect of leadership. The obtained results of the analyses will make it possible to look at leadership in terms of the most recognized and most frequently used project management methodologies, which is missing in the current literature.

The analysis will allow to indicate which leadership competencies are indicated within individual project management methodologies, and to present them in relation to the typology of competences and management styles. The results will enable the planning of further research focusing on the impact of competences on the success of the project and their practical application.

The article consists of four parts. The first part presents the theories of leadership described in the literature on the subject. The second part discusses leadership and leadership competencies from the perspective of selected methodologies. In the next part, the results of the research are presented, allowing to distinguish the similarities and differences in methodology in the discussed aspect, as well as to indicate the most important leadership competences in each of them. The final part focuses on the most important conclusions from the research and further research perspectives.

2 Leadership Theories

The concept of leadership has been widely analyzed and described by researchers over the past 90 years. Initially, in the 1930s, it was assumed that a leader is born with a set of specific characteristics that affect his effectiveness (Rehman et al., 2020). At that time, three main groups of traits of an effective leader were distinguished: personality, abilities, and physical appearance. In the next decade, the view that a person is born with leadership qualities was rejected, and the approach to leadership was based on behavioral styles. According to the theory of styles, becoming a leader was possible by adopting an appropriate style.

In the 1960s, researchers described situational theories according to which leadership was a single common pattern of behavior. Contingency theories tend to follow the same pattern (Turner & Muller, 2010):

1. Assess the characteristics of the leader
2. Evaluate the situation in terms of key contingency variables
3. Seek a match between the leader and the situation

Another theory was popular in the 1980s and 1990s, when transformational, transactional, and visionary leadership was highlighted. The first type occurs when the leader and the team try to form a relationship that will enable them to increase their motivation and morality (Tyssen et al., 2014). Presented leadership approach focuses on building relationships and shows the importance of charisma, developing a vision, and building courage, respect, and trust (Turner & Muller, 2006). In the transactional leadership model, the leader takes the initiative in relationships with people, making it possible to achieve a common, higher goal by the leader and the team. Visionary leadership, in turn, is based on the leader building an image of an attractive and real future that he and his team will strive for (Sully de Luque et al., 2008; Carton et al., 2014; Stam et al., 2014; Van Knippenberg & Stam, 2014).

The beginning of the twenty-first century is marked by the emergence of the emotional intelligence theory. Daniel Goldman pointed out that emotional intelligence is the ability to recognize and manage one's own and others' feelings. According to his research, emotional intelligence allows leaders to be successful in an organization, since an emotionally intelligent leader is able to recognize and influence the emotions of others, and this in turn brings success in professional interpersonal relationships. Goldman distinguishes five main emotional competences: self-awareness, self-control, motivation, empathy, and social skills (Dulewicz et al., 2003).

In addition to the theory of emotional intelligence, the literature also discusses the school of competence. This approach is represented by Dulewicz and Higgs (2003), who, on the basis of literature research and their own analyses, identified 15 leadership competences and divided them into three groups: intellectual, emotional, and managerial. According to this approach, it is possible to define appropriate leadership competence profiles for various types of implemented projects.

The servant leadership theory has also become popular in recent years. It was described by Greenleaf (1982) in the 1970s, but at that time there was no commonly accepted definition of the notion. The essence of this leadership theory is to serve others (Van Dierendonck, 2011). In the beginning, a person has natural feeling that make him or her want to serve. Later it turns into a conscious choice to strive to be a leader. There is a significant difference between servant leader and traditional leader, which results from a lower drive for power and the acquisition of material goods (Kulachai et al., 2018).

3 Leadership Competences in Selected Methodologies

Project management methodologies have influence on efficiency, quality and ultimately the probability of project success (Joslin & Muller, 2015). In project management practice, project managers and project teams can use many of the methodologies available. Among the best known and analyzed in the literature are: PMI, Prince2, IPMA, Lean, Scrum, and Kanban. Each methodology provides guidance on how to implement leadership and which competences are important for being a leader. For the purpose of the present analysis, two agile methodologies (Lean and Scrum) and two classic methodologies (PMI and IPMA) were selected.

In the ICB 4.0 guidelines, leadership is defined as providing direction to individuals and groups (IPMA, 2015). It consists of the ability to select and apply appropriate management styles in various situations. In addition, the leader must be considered when presenting the project to senior management and other interested parties. The leader must consciously use different leadership styles, adapting them to his or her character, the project, the managed team, and other interested parties, as well as the situation. The adopted leadership style determines how the project manager will behave, communicate, manage conflicts, control the behavior of team members, and influence decision-making processes and the number and type of delegated tasks.

IPMA (2015) indicates five key leadership competences, for which assigns measurement indicators. First key competence is initiating actions and proactively offering help and advice. The leader who has got this competence, should: propose or exert actions, offer unrequested help or advice, think and act with a future orientation, balance initiative and risk. Second key competence is to lead, coaching and mentoring of individuals and teams to increase the quality of their work. The leader should point to the people and the team members how they can improve their capabilities, and also establish a vision and values. Moreover, he should align individual objectives with common ones, and describe the way to achieve them.

As a third competence IPMA (2015) indicates taking ownership and showing commitment. There are few measures that can be used to judge this competence, such as:

- Speaking out about the project in positive terms
- Being responsible and committed in behavior, speech, and attitudes
- Use of measures and performance indicators
- Increasing the enthusiasm for the project
- Searching for ways to improve the project processes

Another competence is exerting appropriate power and influence over others to achieve their goals. The measures of competence are using different ways of exerting influence and power, demonstrating timely use of influence and/or power, and being perceived by stakeholders as the leader of the project or team.

The last key competence is making, enforcing, and reviewing decisions. This competence is measured by dealing with uncertainty, explaining the rationale for decisions, inviting opinions and discussions before making decisions in an appropriate and timely manner. Among indicators we can mention also influencing stakeholder decisions by offering analyses and interpretations, clear communication of decisions and intentions, reviewing and changing decisions according to new facts, and reflecting on past situations to improve the decision process (IPMA, 2015).

According to PMI, successful projects require strong project manager leadership skills at all stages of the project lifecycle. Among the most important leadership competences, PMI lists (PMI, 2017):

- Visionary thinking
- Being optimistic, positive, and honest
- Effective communication with the team, showing respect, cooperation
- Relationship and conflict management
- Cultural sensitivity
- Lifelong learning, result- and action-oriented
- A holistic and systemic view of the project, focusing on important issues
- Applying critical thinking
- Building effective teams

In the PMBOK Guide (PMI, 2017), leadership styles were distinguished, that the project manager chooses based on his or her personal preference, or as a result of the combination of multiple factors associated with the project. The style a project manager uses may change over time. Major factors to consider when choosing a style are leader characteristics, team member characteristics, organizational characteristics, and environmental characteristics. Some of the most common examples of leadership styles are (PMI, 2017): Laissez-faire, Transactional, Servant leader, Transformational, Charismatic, Interactional.

Laissez-faire is a style that gives autonomy to team members, so they can make their own decisions and establish their own goals. It is bottom-up style, where project manager is a servant of the group (PMI, 2017). Transactional style is focus on supervision, organization, and group performance. Leader uses rewards and punishments to motivate team members (Xenikou, 2017). Another style which is Servant leader is demonstrating commitment to serve and put other people first. He focuses

on sustainable performance over the long run (Eva et al., 2019). Transformational style is when a leader encourages, inspires, and motivates team members to be creative and implement changes. He achieves it by giving an example (Xenikou, 2017). Leader with charismatic style has influence on other by using communication skills, persuasiveness, and charm (Pillai & Meindl, 1998). And leader with interactional style is a combination of transactional, transformational, and charismatic styles (PMI, 2017).

In agile methodologies, people are the most important part of the organization, hence the key task of the leader is to enable them to be active, creative, and to motivate them. The term agile methodologies describe a different approach to leadership than in the classical methodologies. First of all, they distinguish the ability to motivate people (Energize People) oriented towards their internal motivation. A leader needs to understand people's basic, inner desires, such as status, power, curiosity, and relationships. He or she must also recognize the desires of team members and lead them accordingly. The second element is to skillfully place power in the hands of the team (Empower Teams). The leader understands that teams are able to organize themselves, and that delegating responsibility and decision-making powers raises his or her status in the company. An agile leader is able to define the boundaries and directions of the activities of a self-organizing team and to develop the employees' competences. In addition, this approach can create an adaptive and scalable organizational structure and help to skillfully manage changes. An agile leader understands and allows his or her team to experiment in a safe environment, stimulating growth and implementing changes effectively (PMI, 2017).

In Lean methodology, leadership is based on optimizing all aspects of the business, including working relationships between the project manager and employees. Lean distinguishes five essential lean leadership competences. First one, self-development, which mean that lean leaders are role models, so their attitudes will be copied by employees. Second, creating a culture of continuous improvement, which mean cooperation of employees and leaders in their mutual strive for perfection. This competency is one of the most important ones. Realizing a culture of improvement is far more difficult than managing employees day by day. Next one is coaching employees, that is teaching employees their individual roles. Essential mentoring competencies include the ability to inspire self-confidence and motivation, being a good listener, knowing how to provide effective feedback, helping with goal setting and planning, and giving advice at the right moment.

Another important competence is communication skills. Leaders have to communicate with employees on the real work floor to understand and set reasonable standards and to implement policy deployment throughout their department. A Lean leader must be able to inform their employees about what they can expect and what is expected from them.

Last, but not least, is motivational skills. Leaders ought to be able to motivate themselves for Lean management and inspire employees for Lean management. Without truly intrinsic motivation, it is challenging to succeed with a difficult transition such as Lean implementation (Aij et al., 2015).

The Scrum Master concept is used in in the Scrum methodology, where a leader should have a relationship with the team. This relation appears in daily scrum meetings, sprint planning, sprint demo, and retrospective. Moreover, Scrum Master should create communication channel between whole team, the owner of the product and stakeholders, to avoid any conflicts and removing impediments. Scrum Master should also implement a team in agile practices, forecasting and agile estimating and planning (Ockerman & Reindl, 2019). A Scrum Master is a servant leader, for whom the most important are the needs of the team members. His main goal is to achieve results in line with the organization’s values, principles, and business objectives (Greenleaf, 1982).

4 Similarities and Differences among the Selected Methodologies

Each project is a specific task taking place in a specific environment. When choosing a project management methodology, project managers and project team managers are guided by a considerable and practically unique number of factors. There are also similarities and differences among the methodologies in terms of leadership competences.

A comparison of the methodologies presented in the previous section shows that in terms of leadership competences all the analyzed methodologies include competences related to communication, cooperation, and building relationships in a team (Fig. 1). This means that all methodologies consider communication competences

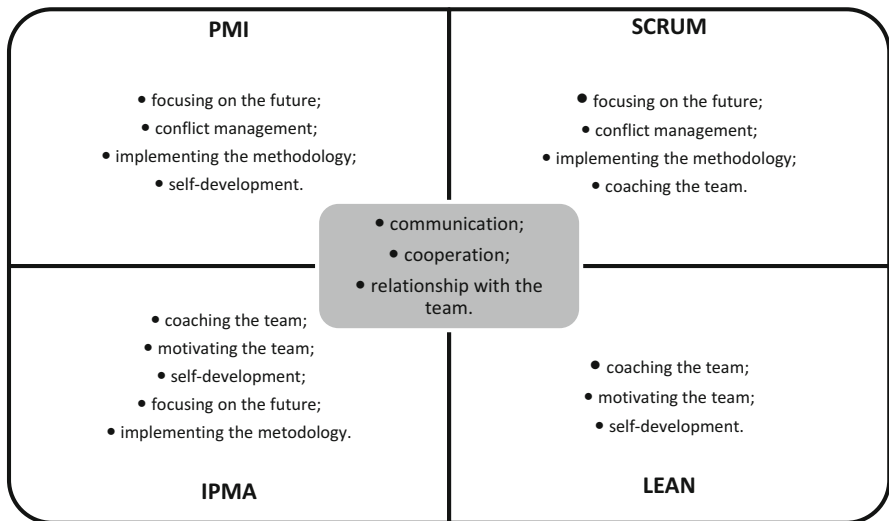


Fig. 1 Comparison of project management methodologies. Source: authors own study

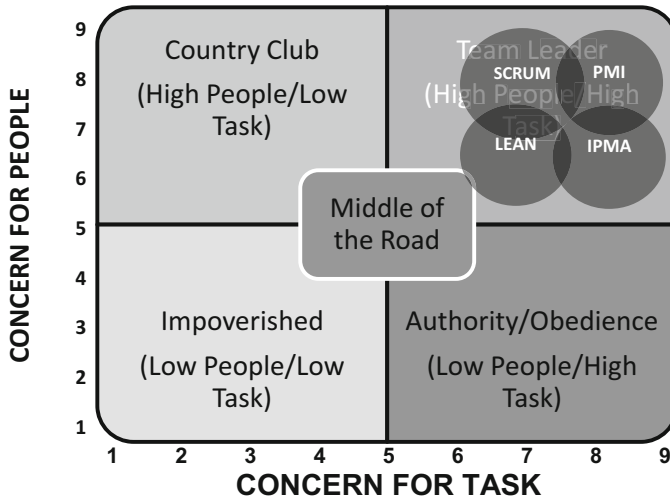


Fig. 2 The selected methodologies on Blake and Mouton leadership grid. Source: authors own study

important, which distinguishes them from the other competencies mentioned in the methodologies. While the remaining competencies are indicated in two or three of the methodologies analyzed, there is no identical set of competencies. It can be noticed that conflict management is dealt with in the PMI and SCRUM methodology and employee motivation in IPMA and LEAN. At the same time, these are the competencies most rarely mentioned in the analyzed methodologies.

Relating the analyzed competencies to the previously mentioned typology of Higgs and Dulewicz (2003), it can be observed that the methodologies described concentrate on intellectual and managerial competencies. Emotional competencies that appear in the methodology guidelines are mostly contained indirectly.

It is interesting to refer the analyzed methodologies to the management styles described by Blake and Mouton's (1964). They are based on high communication competencies and relations with the team; therefore, the methodologies concerned are highly people-oriented in terms of management styles. Similarly, the focus on tasks is at a high level, but in the case of classic methodologies, there is a focus on visionary competencies and a holistic and systemic view of the project, which translates into precise and long-term task planning. Figure 2 shows that all the methodologies present the team leader style.

As a result of the analysis and comparison, one may specify the ideal set of leadership competencies that a project manager should have. The list is based on the categorization of Gordon and Howell (1959), and includes the following competencies:

1. Organizational: implementing the methodology, coaching the team, estimating and planning, creating a culture of continuous improvement;

2. Interpersonal: self-development, being a visionary, optimistic, positive, respectful, collaborative leader;
3. Communication: creating communication channels, fostering cooperation, relationship with the team, motivating the team;
4. Troubleshooting: conflict management, enforcing rules, focusing on the future.

Improving leadership competences is a key element of effective project management in a constantly changing reality. Knowledge of the scope of leadership competences and their distribution is crucial in developing the right competencies that will ensure the success of the project.

5 Conclusion

Leadership is not a uniform concept in both management theory and practice. Leadership is defined as a form of authority or a term related to managing. In the organizational reality, there are two different approaches to defining leadership: as a process and a quality. The leadership process refers to the unforced orientation and coordination of individuals operating daily in an organization to achieve specific goals. Leadership as a quality is a set of personality traits of people who, through their actions, influence the end result (Stoner et al., 1995).

All the methodologies analyzed present their own set of competencies of an ideal leader, giving project managers tips as to which competency area they should develop. Communication competences related to building relationships and cooperation with team members turned out to be the most important ones in all methodologies. The comparison of the selected methodologies has shown that although very similar, they are not identical. Each methodology adds a unique element which distinguishes it from the others. By listing the methodologies, the author has created a complete set of competences that combines the ones indicated in the analyzed methodologies. This list includes organizational, interpersonal, communication, and troubleshooting competences.

Practical use of the guidelines from the described methodologies is undoubtedly the perfect key to success in achieving the goals set by a project manager. The presented research is an introduction to the author's further analyses on the extent to which leadership competences affects the project's success, and which competences are the most valued and used by project managers in practice. The author's further research will focus on investigating the impact of the project manager's leadership skills on the success of a project in practice.

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Part II
Eurasian Business Perspectives:
Management

Impact Analysis of Unified Communications on Managers' Verbal Communication and Organizational Form



Timo N. Heinrich

Abstract In this study the verbal communication behavior of managers in Europe and the United States of America, how bureaucratic or adhocratic their work environments were, and their use of Unified Communications (UC) were analyzed. Accounting for over one-third of an organization's payroll, management is a costly and powerful resource with the scope and ramifications of a manager's decision, also a competitive factor. The underlying theories were Wittkewitz's statement that middle-managers spend two-thirds of their time with verbal communication and social software could shift this management task to subordinates. Resulting either in more time for important management tasks, like proactive strategic planning, or be reassigned to more productive work, rendering the middle-management tier surplus. The use of UC might be facilitating a transition to an organizational form that is better suited for the business environment of the twenty-first century, like adhocracy. Because current and future organizations are globally interconnected, UC might have significant effects on the management of virtual teams across diverse cultural locations. Linear regression was used to analyze the data in this non-experimental correlational design. The results showed managers spent, on average, more than 50% of their time with verbal communication, that companies were in the transition from bureaucracy to adhocracy, and supervisors led this transition.

Keywords Adhocracy · Bureaucracy · Culture · Future organizational forms · Managerial communication · Unified communications

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1 Introduction

The motivation for this study was driven by the fact that no quantitative studies of managers' verbal communication time have been conducted in the twenty-first century, measuring the influence of the exponential advancements of communication and virtual collaboration technologies, in particular Unified Communications (UC), and their implementation into the workplace. This study analyzed the effects of UC on organizational forms, how UC might be a moderator for transition from less adaptive forms to more flexible forms, which are more competitive in the twenty-first century.

Competitive advantage in a kinetic environment dominated by extremely increased availability, quantity, and quality of information requires a flexible, adaptive, and efficient information processing structure (Hamel & Zanini, 2018). But *bureaucracy* is an organizational form of the industrial era (Martela, 2019) which still prevails in the current business environment for which it was not designed and is not suited (Hamel & Zanini, 2018).

In a bureaucracy, people are grouped into a rigid and hierarchical structure, according to functions and specializations. Decisions are made at higher levels and executed downward throughout the ranks (Johnston, 1993). Bureaucracies are also shaped by in- or up-focused missions (Johnston, 1993). In-focused organizations are directed to serve themselves (Johnston, 1993). Up-focused organizations serve the agency that empowered them, for example, a board or stockholders (Johnston, 1993). Bureaucracy is defined as the opposite of adhocracy (Cowan, 2016; Johnston, 1993). *Bureaucracies* are for predictability and, therefore, require conformity with policies and rules (Martela, 2019), which are enforced by managers who make sure employees are obedient and compliant (Hamel, 2011).

In Hamel's study (2011), management was the least efficient activity in an organization. Hamel provided four reasons to support this statement. Managers spent a great deal of their time with the supervision of others' work and were usually higher paid than their subordinates, which resulted in high overhead costs. Second, hierarchical structures moved the most powerful decision makers away from the frontlines where the action happened, which increased the risk for fatal decisions. Third, hierarchical structures sacrificed flexibility and decision-making speed. Fourth, hierarchical structures systematically disempowered lower-ranked employees by narrowing their scopes of authority and constraining their incentives to innovate.

Today, employees in most bureaucratic organizations are still incapacitated (Martela, 2019), deprived of using their sound decision-making skills (Hamel, 2011) which are based on competence, training, and experience (Hamel, 2011; Hamel & Zanini, 2018). Although people prove to be able to make decisions in their private lives in a variety of areas and budgets (Hamel, 2011), their incapacitation is either consciously or unconsciously used to preserve power and status of the roles managers fill in an organization. However, decision-making is a privilege in

bureaucracies reserved to senior management level only (Hamel, 2011; Johnston, 1993; Martela, 2019; Toffler, 1970).

Adhocracy is a recognized organizational form in which people from different specialties are flexibly and quickly grouped together to most efficiently fulfill the organizational mission (Travica, 1999). These groups are usually project teams or task forces. Additionally, little to no formalization needs to be present so team members can focus on efficiently solving the problems at hand and not on formal processes and procedures that slow down mission achievement or impede making innovation.

The main findings and contributions of this study were, despite its limitations, that managers still spend a great deal of their costly time at work with verbal communication, although approximately 20% less than in the twentieth century. This decrease may be caused by socio-economic changes and/or technological advancements. Future research is recommended for further analysis on how to optimize manager communication time for organizations to become more efficient. In this study a quantitative design was applied to 52 participants from two geographical different cultures, in the twenty-first century which is dominated by fast changing business environments and technological advancements.

2 Literature Review

2.1 *Adhocracy*

Adhocracy facilitates creativity and is based on what Kelly (1988) described as self-management or Manz and Sims (1991) as self-leadership of the functional team members and, therefore, substitutes for formal leadership (Kerr & Jermier, 1978). The adhocratic leader will be: a functional member of the project team and effect coordination between the members and other teams (Mintzberg, 1979), an integrator (Lawrence & Lorsch, 1967), a coach and obstacle remover (Johnston, 1993), and a coordinating and facilitating *primus inter pares* (Dolan, 2010). From a manager's perspective it is not surprising self-management, at the first glance, is something threatening the manager's right to be and, therefore, the manager might oppose rather than welcome the idea (Garbuio & Lin, 2018).

Wittkewitz (2010) hypothesized social software enables employees to directly exchange information themselves that previously had been exchanged via their managers. Wittkewitz stated further, efficient organizations were adhocratic and for adhocratic organizations, social software tools were essential. Also *new adhocratic* organizations, as defined by Dolan (2010), have flat hierarchies and integrated coordinated communication infrastructures for effectiveness, known as UC.

2.2 *New Adhocracy*

The fast pace of technology, with its enhanced data processing and communications, resulted in the new adhocracy (Dolan, 2010), where contributors are loosely organized by modern networked multimedia technologies. These contributors are often freelancers, examples are, experts, actors, musicians, photographers, journalists, even political movements and terrorist organizations. The effectiveness of these groups is based on communications infrastructures for coordination and integration (Dolan, 2010). Another example is peer-to-peer sharing networks for software and video piracy. Organizationally, the new adhocracy consists of internal and often contracted experts in a flat hierarchy without middle-managers (Dolan, 2010).

Mintzberg (1979), for example, proposed the hybrid bureau-adhocracy form, which could emerge when the stable environment of a bureaucracy changed to a dynamic one. Slater and Bennis (1964) identified hybrids that might arise out of a need for flexibility and adaptability during a period of transition. Waterman (1992) agreed excellent companies were bureaucratic and adhocratic.

2.3 *Origins*

According to Dolan (2010, pp.33–50), the term adhocracy was coined in 1964 by Bennis and Slater and further described in their 1968 book, *The Temporary Society*, where they discussed the adaptive and flexible organization. Alvin and Heidi Toffler (1970) were the second to use the term in their book *Future Shock*. Mintzberg (1979) described adhocracy very thoroughly in *The Structuring of Organizations* and Waterman (1992) in *Adhocracy: The Power to Change*.

2.4 *Organizational Forms of the Future*

Bader et al. (2019) suggested the design of future organizations will be influenced by demographic and social changes of the upcoming generation Z (born between mid-1990s and early 2010s) and beyond. Before generation Z, companies determined working conditions because they could draw from excess labor where candidates were competing for vacancies. With generation Z the situation has turned, now companies are competing for candidates, which puts candidates in the position to determine the working conditions. The preferences of these upcoming generations are also shaped by social changes.

Earlier generations were driven by career advancements and salary. However, generations X and Y had already started to value family time over career advancement. For example, 56% of Deutsche Bahn employees favored six days of additional paid leave over a salary increase of 2.62% (WirtschaftsWoche, 2017). Thus,

work-life-balance has become an important factor to compete for human resources. Also, high digital maturity of potential employers is important to the future labor force, as well as the opportunity to grow professionally and often also academically. In years past, people entered the labor market after education. Today, many people enter the labor market and advance their academic and professional career in parallel, expecting employers' support. Remote working and flexible working hours are also very important to the contemporary labor force.

According to Bader et al. (2019, pp.756–764), future companies will have to fulfill the demands of the market and the desire for self-determination of employees alike. Future companies must be able to adapt quickly with a flexible infrastructure and fast decision-making. Organizations of the future need to be transparent, with promotion based on competence, free information flow, team size less than six, and participative leadership style (Bader et al., 2019). Managers must become coaches empowering their team members then, assisting and supporting where necessary. Some future organizational forms Bader et al. suggested were amoeba organization, fractal organization (Joseph, 2019), swarm organization, sociocracy, and Holacracy®. Until 2017, only a few hundred small- and medium-sized organizations were using either a sociocratic or a holacratic version (Romme, 2017).

2.5 *Unified Communications*

UC emerged in the late 1990s and the early 2000s and integrates non-real-time communications, like e-mail, faxes, and voicemail across devices as unified messaging, plus real-time electronic conversations, such as telephony and video conferencing (Burns et al., 2011). According to a 2011 survey by Constellation Research, 64% of the respondents reported a positive ROI (Return on Investment) of UC and another 30% reported a payback period within two years (Herrell, 2012). Because of UC real-time connectivity capacities and multi-modal applications support for anywhere and anytime communications, Herrell predicted ongoing acceptance and adoption of UC.

Herrell (2012) also projected social communications soon to be “the dominant form of business communications” (p. 11) and, therefore, expected the integration of UC applications into enterprise social software. Many businesses preferred social software for internal communication (Herrell, 2012). Enterprise social software accelerated decision-making through quick and easy information sharing, knowledge exchange, access to experts, and collaboration (Herrell, 2012).

The prediction, “enterprise social software will become a major application for business communications” (Herrell, 2012, “Unified Communications Trends for 2012,” para. 6) paralleled with Wittkewitz (2010) that social software may substitute for the oral communications conducted by management. Physical meetings are likely to be replaced with advanced electronic communication forms (Yukl, 2019). According to Silic et al. (2014, pp. 1–19), UC is already an integral part of professional lives.

Electronic social collaboration is based on UC tools and applications (Lighthead, 2014) consolidating multiple electronic communication applications into a single interface for efficient internal and external communications and collaborations (Lighthead, 2014). UC could cut across organizational boundaries and skip managers, enabling the stakeholders of tasks or problems to communicate directly.

By breaking up formal and vertical communication chains (Hamilton, 2017), UC may lead to less formalism, faster information processing, less information loss, greater creativity, increased innovation, more time for proactive activities like reflective planning (Yukl, 2019), as well as a reduced need for managers (Wittkewitz, 2010; Yukl, 2019).

Wittkewitz (2010) reasoned social software may substitute for managers' verbal communication and management because with Carlson (1951/1991), Guest (1956), Mintzberg, 1975/1990; Sayles, 1979; Stewart, 1967/1988), and Zandan (2016) found managers still spend a great deal of their time with verbal communications. However, no quantitative research data existed to support this hypothesis. According to Yukl (2019), there was a need for more descriptive research on the effects of current communication and information processing technologies, globalization, and organizational forms on managerial activities and roles.

2.6 UC Solutions Market Leaders

There are a handful of UC tools that rule the rapidly growing market. The two major players are Cisco and Microsoft (Bort, 2015; Burbick, 2015; Elliot et al., 2016). Cisco's UC tool was first introduced to the market in 2006 and Microsoft's in 2007 as Office Communicator; in 2011, renamed to Microsoft Lync; and in 2014, rebranded to *Skype for Business*. For this study, the focus was on the following UC features: presence, instant messaging, telephone and video conferencing, telephony.

3 Conclusion and Need for the Study

According to the literature, UC has become an integral part of social interactions on the job and in private lives of workers (McGee-Smith and Howell, 2012; Silic et al., 2014). Previous UC studies and literature were only focused on collaboration, team efficiency, customer satisfaction, or successful UC implementation but not on the effects on managers and organizational structures.

Because management is an expensive part of human capital (Hamel & Zanini, 2016), it is important for organizations to gain insight if the need for management has changed because of social software at work and learn how to take advantage of changes from current communication habits and leverage information technologies to stay on top of competitors and be most efficient.

Hamel (2011) suggested further research on whether the adoption of self-management was related to the culture and whether self-management could be a model for large traditional organizations. The literature review provided evidence that new communications technologies influenced managerial work and organizational form but it did not identify the specific influences of particular communication technologies and activities on managerial work or the organizational form.

The current study was needed to address this issue by examining the relationship of social software and managers' verbal communication time in relation to culture and whether or not social software had an influence on the organizational form. Future studies may examine how much time managers spend with proactive activities, like reflective strategic planning, subordinate training, and team building (Yukl, 2019).

This study was important because management is a costly resource (Hamel & Zanini, 2016) and to thrive in fast paced and global business environments, quick adaptation, virtual collaboration, and intercultural collaboration are key success factors (Meske et al., 2018; Yukl, 2019). Organizations may apply the results of this study to save costs and generate revenue by optimizing their management resources through UC, to address cultural issues of UC applications and to change their organization from bureaucracy toward adhocracy with UC. Business consultants may use the findings as scientific references for their recommendations to increase their clients' organizational efficiency and fitness for the future. Curriculum developers may use the empirical evidence to revise leadership courses.

The current study used a non-experimental correlational design to describe and predict the relationships between UC and verbal communication, and between UC and organizational form. Additionally, the relationship of UC and verbal communication was assumed to be moderated by national culture. Thus, the moderating effects of culture were examined with two national cultures (one from Northern America and one from Europe).

The relationship of the Means of verbal communication time and UC use were analyzed in the context of these two national cultures. The geographical areas for the participants were Europe and North America with the specific population being the supervisors of staff. The survey was conducted in 2020.

4 Measurement

Verbal communication time of managers was measured in hours per workday and the level of measurement was ratio. The opposing organizational attributes of adhocracy and bureaucracy were measured with two five-point Likert-type scales grouped into low, neutral (0), and high ratings. One scale was about the leadership style and the other about the work environment. The research instrument in [Appendix 1](#) was designed following the literature. Attributes for leadership styles were, to what degree the manager was a functional member of the team, authoritarian, coaching, controlling, facilitating, and gate keeping information. Organizational

attributes ([Appendix 2](#)) for the work environment followed the literature and included: the presence of formalism (emphasis on protocol rather than on problem solving), level of standardization of procedures, level of autonomy over actions, speed of implementation and decision-making (flexibility and responsiveness), level of supervision and formal authority, level of role unambiguity, level of distinction of formal hierarchy (who manages and who is managed), level of innovation, level of creativity, level of customer-friendly policies, practices and procedures, level of self-organizing, level of impersonality, speed of decision-making, level of information sharing, level of turf defense, amount of project teams or task forces, level of centralized decision-making, level of organizing by specialty or function (skills or type of work), level of decision-making according to organizational hierarchy, level of customer orientation, and level of communication through chain of command.

The answers were compounded into a score and the scores among participants were analyzed with linear regression. The presence of UC was measured by months of use with use below 24 months defined as absence of UC. Culture was measured by closed-ended questions for the workplace and nationality. The level of measurement of culture was nominal.

5 Research Method and Design Appropriateness

A non-experimental correlational design was most appropriate to address the problem and to make the results comparable for future studies and iterations a quantitative design was selected. The results may attract other researchers to analyze the relationship of UC tools and managerial time spent for reflective strategic planning or to qualitatively investigate the differences.

A quantitative approach was good for a first glimpse of the problem whether UC matters and any significant relationships to the measured variables. A qualitative or mixed-methods approach was not appropriate for hypothesis testing or to produce more generalizable results to a larger population with less subjectivity than previous studies. The stated problem required a quantitative design because of the nature of the generated data. A mixed-methods approach was most appropriate to analyze contradictions between qualitative findings and quantitative results (Wisdom & Creswell, 2013), which was not the intention of this study. Also, quantitative research was more representative because larger samples were used and more homogenized than in a qualitative approach, which made the results more generalizable and replicable with fewer limitations. Quantitative studies can be used to predict future behaviors, whereas qualitative research is limited to individual perceptions and is less objective, thus making it harder to generalize research findings (Johnson & Christensen, 2017).

The intention of the study was to analyze how strongly UC was related to managers' verbal communication time and organizational environment, thus, the research questions and hypothesis testing required quantitative data. Also, the intention was to extrapolate the results to other similar environments for

improvement and to provide basis for further research. Additionally, there were quantitative criteria available defining certain types of organization forms.

The four research questions were:

1. What is the relationship between UC use and time managers engage in verbal communication?
2. To what extent does culture moderate the relationship between UC use and time managers engage in verbal communication?
3. What is the relationship between UC use and the score of organizational attributes?
4. To what extent does culture moderate the relationship between UC use and the score of organizational attributes?

The corresponding hypotheses were:

H1₀: There is no relationship between UC use and time managers engage in verbal communication.

H1_A: There is a relationship between UC use and time managers engage in verbal communication.

H2₀: The relationship between UC use and time managers engage in verbal communication is not moderated by culture.

H2_A: The relationship between UC use and time managers engage in verbal communication is moderated by culture.

H3₀: There is no relationship between UC use and the score of organizational attributes.

H3_A: There is a relationship between UC use and the score of organizational attributes.

H4₀: The relationship between UC use and the score of organizational attributes is not moderated by culture.

H4_A: The relationship between UC use and the score of organizational attributes is moderated by culture.

6 Population, Sampling, Data Collection Procedures, and Rationale

6.1 Population

The population for this study was all supervisors of staff in participating multicultural organizations that either use UC or not. Although, culture in this study was focused on national culture, the population also included different national, regional, and organizational cultures. The population was supervisors of staff from European and Northern American countries. The specific population was the supervisors of staff from European and North American countries registered on LinkedIn within the researcher's contacts (154) and their contacts, which exposed the appeal to several

thousand of potential participants. To be eligible participants had to have more than five reports and to be working for companies with more than 30 employees.

6.2 *Sampling Frame and Unit of Analysis*

The sample was solicited via LinkedIn and further refined according to demographic questions. The sampling frame was the respective North American and European countries with respondents who matched the specific population where the participants' workplace locations were identical with their nationality. The unit of analysis in this study was all supervisors of staff grouped by one North American and one European country who worked in the same location as their nationality and either used UC or not.

To calculate a sample size needed to provide statistically significant data that can be generalized to the larger population, power analysis was conducted (McDonald, 2014). The first step in the power analysis was the specification of an effect size d , which was the minimum expected difference between the null hypotheses and the alternative hypotheses (McDonald, 2014) to accept the alternative hypotheses. A value of $p = 0.1$ indicates a small difference. With two tails, the conventional standard for alpha being $p = 0.05$ (McDonald, 2014), power of 0.95, the effect size of $p = 0.1$, and for up to seven predictors; the sample size needs to consist of 132 participants according to Version 3.1.9.4 of the G*Power (Faul, 2019).

With only 52 participants, the response rate was lower than expected despite multiple appeals on LinkedIn with a potential reach to more than 645 million registered users of which more than 163 million are from the United States of America and more than 201 million are from Europe (LinkedIn Corporation, 2019). The researcher touted for participation by explaining the potential benefits for the participant and the organization, and the safeguarding of participants' data and anonymity. Participants were selected from the countries in North America and Europe with the highest concentration of respondents being supervisors of staff and whose job location and nationality were identical.

6.3 *Instruments*

No instruments were found to collect data about the time managers spend on oral or verbal communication and adhocratic or bureaucratic organizational forms according to the respective leadership and work environment attributes, not even in the *Mental Measurements Yearbook*. The newly created instrument for this study and future iterations was a Likert-type survey for the work environment and a numerical question for the percentage of verbal communication time. The criteria for the questionnaire were derived from the literature according to [Appendix 2](#).

7 Validity

7.1 Internal

To achieve very high internal validity, corresponding control groups not exposed to the predictor variable were analyzed. This minimized alternatives to explain differences of findings other than the predictor variable. Additionally, the demographic information and thorough instrument validation added to the internal validity. A field test increased the internal validity of the instrument and the tool with which the survey was conducted.

To reduce dull or patterned answers on one end of the given scales, the questions were designed so that logically conflicting values were not always on the same end. Twenty Likert-type questions for several different work environment attributes indicating either bureaucratic or adhocratic organizational attributes validated the scores of the respective organizational form if they were corresponding in the same direction and proportion (Churchill, 1979). The organizational attribute questions were grouped into leadership style attributes and work environment attributes, according to the relevant literature. Thus, the compounded score of leadership style could be evaluated as a potential confounder variable for the relationship of percentage of average verbal communication time per workday between UC and non-UC users.

7.2 External

The study may be used to extrapolate differences in leadership styles in relation to culture and UC exposure. The study may also lead to further research with different organizations and/or cultures to confirm or deepen the knowledge about the effects of UC on leadership styles, management, and work environments.

8 Data Analysis

The collected data were transformed into information by exporting from [surveymonkey.com](https://www.surveymonkey.com) via Microsoft Excel into Microsoft Access. Then, the raw data were coded according to the codebook ([Appendix 2](#)) and scores for leadership style and work environment were calculated. The scores were analyzed with Statistical Package for the Social Sciences (SPSS®) and R. SPSS® and R generated results according to all preset or predetermined statistical parameters, such as alpha, effect size, and power by using regression analysis.

The relationships of the criterion variables (work environment and time engaged in verbal communication) and the predictor variable (months of UC use) in

correlation to potential influence factors, the moderator variable (culture) were analyzed from data of a questionnaire (Appendix 1) with six questions indicating a more adhocratic or bureaucratic leadership style and 20 questions a more adhocratic or bureaucratic work environment. Additionally, one question about the average hours spent with verbal communications on a regular workday and one question about the average hours of a regular workday were asked.

Because bureaucracy and adhocracy contrast one another, the values of the answers to the organizational attribute questions were represented antagonally. To prevent research bias, the number of questions was even and equally divided per extreme. It was mandatory to answer all questions on the questionnaire, except for age, and in case no UC tool was used, the months of UC use. Bureaucratic scores ranged from zero to minus two and adhocratic scores from zero to plus two for each question. Because of the number of respective questions, six and twenty, the compounded scores for leadership style ranged from minus 12 to plus 12 and for work environment from minus 40 to plus 40. Zero represented neither nor and was assumed to suggest a hybrid organizational form or an organization in the process of transiting from bureaucracy to adhocracy. The modulus of the compounded scores represented a higher or lower confidence that an organization or the leadership style of a participant was adhocratic or bureaucratic. Finally, the mean of percentage of time spend with verbal communication and the mean of work environment attributes of all participants who either used UC or not, were compared using linear regression. Finally, the Means of percentages were analyzed considering culture.

9 Results

9.1 *Comparison of Means of Percentage of Verbal Communication with Previous Studies and Interpretation*

From comparable previous studies in which only managers were studied, the Means were 74.67%. This was calculated from 66% and 80% from Stewart (1967/1988) and 78% from Mintzberg (1975/1990). The previous studies were all conducted in the twentieth century in a time when no electronic communications were available but telephone.

The mean percentage of managers' verbal communication from this study was 54.71% for all relevant data, regardless of whether UC was used or not. For non-UC users the mean of 59.05% was slightly higher than the overall average and the mean of UC-users of 54.14% was about the same as the overall average (Fig. 1). However, the values for non-UC users were too few and potentially too diverse to extrapolate a linear decrease of managers' verbal communication time from non-UC users to UC-users.

The findings of this study suggest that socio-economic or technological changes of the twenty-first century have had a potential significant decreasing effect on verbal

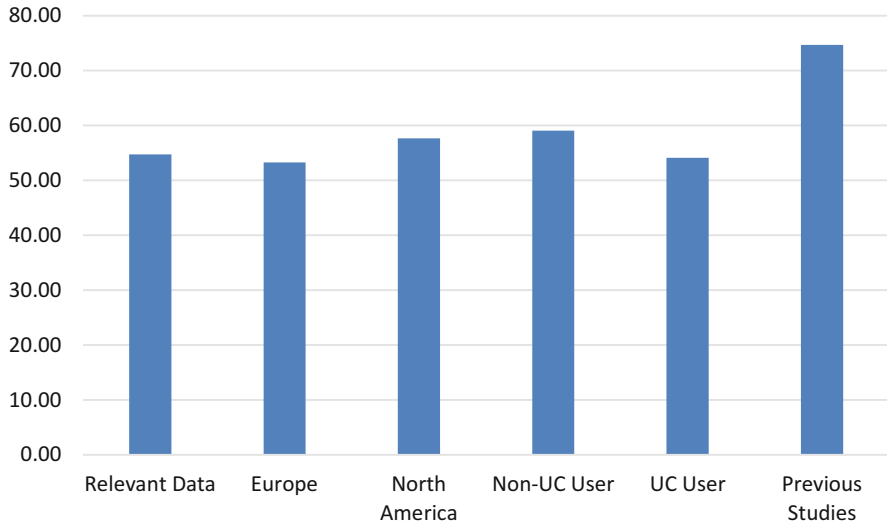


Fig. 1 Mean percentages of managers' verbal communication time. Source: Heinrich (2020)

communication time. Less communication may be common (social) or less communication may be required because of a more educated workforce, optimized and automated processes, advancements of technologies, concise language, and how employees are more self-managed.

A combined socio-economic effect with technological advancements could be, in the twentieth century everyone was collocated on premises, whereas in the twenty-first century 30% of employees were working remotely (Baker, 2020). Working remotely requires the technical infrastructure, which made UC infrastructures business essential (O'Halloran, 2020). Since the COVID-19 pandemic, more than 81% work remotely and 41% of those will continue to work remotely when the pandemic is over (Baker, 2020).

Because when employees are not collocated with their superiors, it is not as easy to reach out physically, which might be a potential explanation for the reduced percentage of managers' verbal communication time. If remote working is associated with managers' verbal communication time, then this should be observable in post pandemic studies.

9.2 Interpretation of Means of Workplace Attributes Score

The mean score of workplace attributes for non-UC users was 7.83, for UC-users it was 5.50, and regardless of whether UC was used or not it was 5.77. From these results it can be stated that organizations in North America and Europe are generally in the low adhocratic region, which may be interpreted as hybrid organizational form

(Mintzberg, 1975/1990) or in transit from bureaucratic to adhocratic according to Wittkewitz's (2010) theory. Additionally, this was supported by the most extreme mean scores on questions 10 (1.10) and 11 (1.04), self-organized teams within an impersonal organizational environment.

The difference of Means for workplace attributes between non-UC users (7.83) and UC-users (5.50) suggests UC-users work in more bureaucratic work environments. This difference might be explained because UC is implemented in rather large organizations, which are usually bureaucratic (Hamel & Zanini, 2018). This explanation is supported by the data of this study because only 33% of companies not using UC had 250 or more employees, whereas 78.26% of companies using UC had 250 or more employees. Thus, UC is potentially not associated with the organizational form, resulting in the failure to reject H3₀. The leadership style attributes were in the middle of the adhocratic dimension, regardless if UC was used or not. This could be an indication that leadership style is also not associated with UC use.

The results of this study suggest UC is implemented in larger organizations, which happen to be bureaucratic because of their size (Hamel & Zanini, 2018) or their origins. Bureaucratic organizations are also not able to adapt quickly to changes, even less so if they evolved over decades. The results also show that obviously UC was implemented significantly longer in the United States of America than it was in Germany. Assumably, because the US is generally more technologically inclined and has fewer restrictions with privacy protection laws relevant to UC.

9.3 *Limitations*

The findings about non-UC users from this study were derived from a sample of only six participants, compared to 46 participants who used UC for at least one month. Therefore, the results of this study may not be used to make predictions for larger populations of non-UC users.

However, the results of this study could be descriptively analyzed and compared to results of other descriptive studies with larger and smaller samples. Sample sizes and results from previous studies, e.g. Mintzberg (1975/1990) who studied five CEOs and found that they spent 78% of their time with verbal communication and Stewart who studied 160 middle and top managers in 1967 and 1988 and found that 66% and 80% of a manager's time was spent on verbal communication, could indicate that sample size is potentially not significantly related to managers' verbal communication time.

Further limitations to the results of this study were that the participants were not asked how their percentage of verbal communication time and their workplace attributes differed prior to their use of UC, and also not in detail about the months after 36 months of UC use.

10 Recommendations to Leaders and Practitioners

The results of this study showed there is still a problem with managers spending on average, 54.71% of their time with verbal communication. Other key findings were that UC has been implemented in the United States of America for significantly longer time than it has been in Germany where companies on average scored low on adhocratic dimension and mean scores for leadership styles were in the mid adhocratic dimension. Finally, the results of this study suggested that rather larger organizations use UC and a transition from bureaucratic to adhocratic organizational form is underway.

This study failed to provide enough evidence for leaders and practitioners that UC might mitigate the problem of managers' excess verbal communication time. The low adhocratic mean scores for work environment and the rather higher mean scores for leadership style suggest that organizations are in a transition phase from bureaucracy to adhocracy. Because managers on average scored in the mid adhocratic dimension, they seem to be leading this change and therefore, the recommendation for future studies is to identify effective tools and methods to facilitate this transition.

11 Recommendations for Future Research

Recommendations for future research are to conduct a similar study with a significantly larger sample of 160 or more participants and include Asian cultures because Meske et al. (2018) found that, with the exception of Thailand, Asian cultures differed significantly from North American and European cultures in the adoption of UC technologies.

For a true pre-post comparison in future iterations of this study it is recommended to ask participants how their verbal communication time and their workplace attributes differed prior to the introduction of UC in their organization. Future research about the impacts of UC and remote working on verbal communication and the organizational form, is expected to be significantly impacted through the 170% increase of remote working caused by the COVID-19 pandemic (Baker, 2020).

The recommendation for future research is to analyze which indicators for either bureaucratic or adhocratic work environments are stronger and what weighing factor might be appropriate to reflect reality more precisely. How to further decrease the costly time managers spend on unproductive tasks or to explain why managers spend 54.71% of their time with verbal communication are still problems for future research. It would be beneficial as well to analyze how the socio-economic and technological changes of the twenty-first century are related with verbal communication time and organizational forms.

12 Conclusion

The objectives of this study were to analyze the relationships between UC and managers' verbal communication time, between UC and work environment, and the possible moderating effects on these relationships. The findings of this study failed to provide enough evidence to reject the four null hypotheses that were tested.

An additional finding of this study was the problem of managers spending a great deal of their time on verbal communication is still relevant. Results of this study supported Wittkewitz's (2010) theory that companies were in transition from bureaucracy to adhocracy but failed to provide evidence this was related to UC.

According to the results of this study, the North American and European cultures seem to be very similar in their communications behaviors and workplace environments. Meske et al. (2018) confirmed this assessment for the adoption of UC technologies from a cross-cultural perspective.

Future studies are recommended to provide more evidence for the assumed relationships between UC and managers' verbal communication time, work environment, and to identify effective tools and methods to facilitate the transition from bureaucratic to adhocratic organizational forms.

The contribution of this study to the body of knowledge was that a costly problem associated with managers still exists and that further research is required to provide evidence for tools and methods for leaders and organizations to mitigate this problem and to facilitate the transition toward effective organizational forms that prevail in future business environments.

Appendices

Appendix 1 Instrument

Code	Thinking of your daily work routine	Hours
WR1	How many hours have your average workday?	
WR2	How many hours do you spend with verbal communication, on average, per workday?	

Code	Thinking of my leadership style	Disagree	Somewhat disagree	Neither	Somewhat agree	Agree
	<i>Adhocracy is positive, bureaucracy is negative</i>					
L1	I contribute alongside my team members	-2	-1	0	1	2
L2	I am authoritarian	2	1	0	-1	-2
L3	I am a coach/mentor	-2	-1	0	1	2

(continued)

Code	Thinking of my leadership style	Disagree	Somewhat disagree	Neither	Somewhat agree	Agree
L4	I control the work of my subordinates	2	1	0	-1	-2
L5	I coordinate and facilitate	-2	-1	0	1	2
L6	I control the flow of information	2	1	0	-1	-2

Code	Thinking of my organization	Disagree	Somewhat disagree	Neither	Somewhat agree	Agree
	<i>Adhocracy is positive, bureaucracy is negative</i>					
1	Formalism is more important than solving problems	2	1	0	-1	-2
2	Everything in my workplace is regulated or standardized	2	1	0	-1	-2
3	Deviation from work prescriptions is tolerated	-2	-1	0	1	2
4	Changes are implemented quickly	-2	-1	0	1	2
5	Formal authority and supervision are very important	2	1	0	-1	-2
6	Roles are clearly defined	2	1	0	-1	-2
7	Distinction between supervisors and staff is clear	2	1	0	-1	-2
8	My organization is very innovative	-2	-1	0	1	2
9	The customers of our organization are very satisfied with our policies and procedures	-2	-1	0	1	2
10	My team is self-organized	-2	-1	0	1	2
11	My work environment is impersonal	2	1	0	-1	-2
12	My organization reacts fast to changes in the business environment	-2	-1	0	1	2
13	Information is shared	-2	-1	0	1	2
14	There is much turf defense	2	1	0	-1	-2
15	There are many flexible teams, task forces, or project teams	-2	-1	0	1	2
16	Decision-making is de-centralized	-2	-1	0	1	2
17	Teams are rather grouped by skills and function than by mission or task	2	1	0	-1	-2

(continued)

Code	Thinking of my organization	Disagree	Somewhat disagree	Neither	Somewhat agree	Agree
18	Decisions are made according to position in hierarchy and not according to experience or qualification	2	1	0	-1	-2
19	Mission achievement or customer satisfaction is more important than processes compliancy	-2	-1	0	1	2
20	Communication flows through the chain of command	2	1	0	-1	-2

Appendix 2 Survey Codebook

Code	Leadership style	Adhocratic	Transition or hybrid	Bureaucratic	References
L1	Functional member of the team	High	Neutral	Low	Mintzberg (1979)
L2	Authoritarian overseer	Low	Neutral	High	Dolan (2010)
L3	Coach	High	Neutral	Low	Johnston (1993); Ince (2013)
L4	Control	Low	Neutral	High	Johnston (1993); Dolan (2010)
L5	Coordinator and facilitator	High	Neutral	Low	Dolan (2010); Mintzberg (1979)
L6	Information gatekeeper	Low	Neutral	High	Dolan (2010)

Code	Work environment	Adhocratic	Transition or hybrid	Bureaucratic	References
1	Formalism, emphasis on protocol and not problem solving	Low	Neutral	High	Mintzberg (1975/1990, 1979); Hamel and Zanini (2018)
1.1	Lot of red tape/lot of formalism present	Low	Neutral	High	Johnston (1993)
2	Standardization of procedures	Low	Neutral	High	Mintzberg (1979) as quoted by Travica (1999); Martela (2019); Hamel and Zanini (2018)

(continued)

Code	Work environment	Adhocratic	Transition or hybrid	Bureaucratic	References
3	Autonomy over actions	High	Neutral	Low	Mintzberg (1975/1990, 1979), Martela (2019); Hamel and Zanini (2018)
4	Speed of implementation (flexibility, responsiveness)	High	Neutral	Low	Johnston (1993); Mintzberg (1979); Hamel and Zanini (2018)
5	Supervision and formal authority	Low	Neutral	High	Mintzberg (1979); Martela (2019); Hamel and Zanini (2018)
6	Clearly defined roles	Low	Neutral	High	Travica (1999); Martela (2019); Hamel and Zanini (2018)
7	Formal hierarchy, clear distinction between line and staff, clear who manages and who is managed	Low	Neutral	High	Johnston (1993); Dolan (2010); Mintzberg (1979); Travica (1999); Martela (2019); Hamel and Zanini (2018)
8	Innovative	High	Neutral	Low	Johnston (1993); Hamel and Zanini (2018); Martela (2019)
8.1	Creative	High	Neutral	Low	Johnston (1993)
9	Customer-friendly policies, practices, and procedures	High	Neutral	Low	Johnston (1993); Martela (2019); Hamel and Zanini (2018)
10	Organic (self-organizing)	High	Neutral	Low	Mintzberg (1979); Travica (1999); Martela (2019); Hamel and Zanini (2018)
11	Impersonal	Low	Neutral	High	Johnston (1993), Martela, 2019
12	Speed of decision-making (flexibility, responsiveness)	High	Neutral	Low	Johnston (1993); Mintzberg (1979); Hamel and Zanini (2018); Martela (2019)
13	Sharing/hoarding information	High	Neutral	Low	Johnston (1993); Dolan (2010); Martela (2019)
14	Turf defense	Low	Neutral	High	Johnston (1993)

(continued)

Code	Work environment	Adhocratic	Transition or hybrid	Bureaucratic	References
15	Task forces/project teams	High	Neutral	Low	Johnston (1993)
16	Centralized decision-making	Low	Neutral	High	Mintzberg (1979); Martela (2019)
17	Organized by functional specialty (skills or type of work)	Low	Neutral	High	Johnston (1993); Hamel and Zanini (2018)
18	Decisions are made according to level in organizational hierarchy and not to experience, skill, training and capability, or proven judgment	Low	Neutral	High	Johnston (1993); Martela (2019); Hamel and Zanini (2018)
19	Customer oriented/driven	High	Neutral	Low	Johnston (1993); Martela (2019); Hamel and Zanini (2018)
20	Communicate through the chain of command	Low	Neutral	High	Johnston (1993); Martela (2019)

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Overcoming the Traps in the Adaptive Cycle of Resilience Model



Marijn Meijering, Toon Abcouwer, and Emőke Takács

Abstract In our dynamic world, organizations must adjust and respond to constant challenges to survive. The Adaptive Cycle of Resilience model has been found to be a useful tool to support organizations in dealing with change. The model consists of a standard path of four phases. However, in each phase a trap is identified, which can emerge and obstruct the organization while facing a problem. To help organizations when they get stuck, we aim to answer the question: how the four traps in the Adaptive Cycle of Resilience can be overcome? A literature study has resulted in the creation of a management compass, identifying four aspects that an organization should focus on when getting stuck in the development process. These aspects are versatility—taking an ambidextrous approach by exploiting the present and exploring the future simultaneously; creative environment—support, encourage, and reward the creativity of employees; communication—bidirectional and open; and organizational culture—removing worries, doubts, and other uncertainties with respect to change. The initial validation of the compass has yielded positive results, largely confirming that focusing on the identified aspects is indeed needed for overcoming the traps in the Adaptive Cycle of Resilience model.

Keywords Adaptive cycle of resilience · Lock-in trap · Poverty trap · Isolation trap · Rigidity trap · Management compass

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1 Introduction

Organizations find themselves in a world that is characterized by constant change. Therefore, change has become one of the most important aspects that affect organizations (Brauns, 2015). It can no longer be assumed that current organizational success is sustainable in the future (Fukuyama, 2011). Organizations are faced with highly dynamic and complex environments, which they must adapt to constantly, in order to survive (Brauns, 2015). Achieving this is no easy task, as there is a lot of ambiguity that must be dealt with. In practice, the Adaptive Cycle of Resilience (ACoR) model has been found to be able to support organizations in dealing adequately with these ever-changing environments (Abcouwer et al., 2019). The model assumes that every organization goes through a cyclic succession of phases following a standard path. Each phase requires different assessments and actions from an organization (Abcouwer & Parson, 2011). Change never ends, and as such the model can be seen as a continuum with four states that an organization resides in sequentially. In order to deal with change, organizations must transition through all four phases in the ACoR model successfully. However, research on organizational change has identified four traps that could withhold an organization from doing so (Gunderson et al., 2010). While the existence of these traps is known, it is currently unknown what an organization should do when it encounters these traps. This is unfortunate, since organizations are bound to run into at least one of these traps during a change process. Because of this, the research conducted in this paper is focused on finding ways to overcome these traps, which could assist organizations in realizing a successful change. This is achieved through attempting to answer the following research question: How can the four traps in the Adaptive Cycle of Resilience model be overcome? To summarize, where previous research was focused on identifying the four traps, this paper is focused on overcoming them.

The paper is structured as follows. In order to understand the theoretical approach of this study, it is important to elaborate on the configuration of the ACoR model. Therefore, the first section provides an explanation of the model and the theoretical concepts that constitute it. This section is followed by an explanation of the traps in the ACoR model and their characteristics. Thereafter, literature research to determine how these traps might be overcome is discussed, together with a framework created to assist organizations in doing so. Next, the methodology and initial validation of the framework via interviews are elaborated on. Finally, this paper ends with a discussion of the results, a conclusion, and a suggestion for future work.

2 Literature Review

2.1 *Fundamental Concepts*

There are three fundamental concepts that form the basis of the ACoR model. The first fundamental concept has to do with the influence that the environment has on

the functioning of an organization. The developments in the environment of an organization are not separable from the developments within the organization, this concept is called co-evolution (Abcouwer & Parson, 2011; Allen & Varga, 2006). The organization and environment evolve with constant interaction, the recognition and interpretation of this interaction is imperative for the function of an organization (Abcouwer & Parson, 2011). To equilibrate the dynamics of the organization and its environment, the want–must–can dilemma comes into play. Here, the organization must find a balance between what it desires (want), what is necessary (must), and what is possible (can) (Heene, 2002). The organization is permanently trying to find this balance, while it rotates between stability and (threatening) chaos (Prigogine & Stengers, 1987).

Another fundamental aspect of the ACoR model is the strategic decision-making framework (Thompson, 1967), which can be used to interpret reality. In the model, two aspects of decision-making are confronted, resulting in four quadrants that each requires a different decision-making strategy. The X-axis is the preference of the organization for a certain outcome and the Y-axis the insight into cause/effect relations. Whether these are certain or uncertain determines which of the four strategies the organization should use for decision-making (Thompson, 1967).

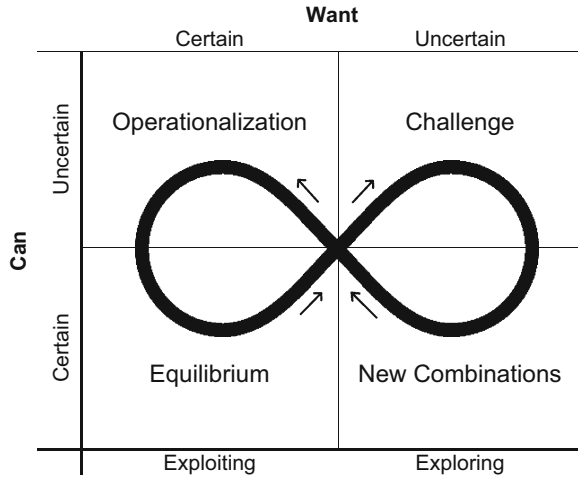
The last fundamental concept is the adaptive cycle, which was first conceptualized by Holling (1986) as a means of interpreting the dynamics of response that disturbances have on complex ecosystems. Four distinct phases have been identified that represent the dynamics of the adaptive cycle: (1) Growth or exploitation— r , (2) Conservation— K , (3), Collapse or release— Ω , and (4) Reorganization— α (Holling et al., 2002). These phases follow a cyclic development. In the exploitation (r) phase, the system is focused on the rapid colonization of areas that were recently disturbed. The following phase, conservation (K), empathizes the slow accumulation and storage of energy and materials. The accumulated resources become tightly bound within the system, preventing other systems from utilizing them. When disturbances trigger a change in the environment, the system is pushed to the release (Ω) phase. In this phase the capital that has been accumulated over time is released due to a loss of control. This phase has also been called creative destruction (Schumpeter, 1950), as parts of the system are destroyed, and new ones have to be constructed. Reorganization (α) represents the fourth phase, where nutrients are reorganized by the system to be able to capture opportunity and to make them available for the exploitation phase (Gunderson & Holling, 2002).

The adaptive cycle, the want–must–can dilemma, and the strategic decision-making framework form the basis of the ACoR model (Abcouwer & Parson, 2011; Gunderson & Holling, 2002; Heene, 2002; Thompson, 1967).

2.2 *The Adaptive Cycle of Resilience Model*

The left side of the ACoR model (exploiting) has a focus on order and repetition, while the right side (exploring) deals with chaos and adjustment (Fig. 1) (Abcouwer

Fig. 1 The Adaptive Cycle of Resilience model. Source: adapted from (Abcouwer & Goense, 2015)



& Parson, 2011). The ACoR model is applicable in organizational theory and insinuates that organizations follow a cyclic development path, which is divided into four quadrants and described as follows (Abcouwer & Parson, 2011).

Normally, the starting point for the cyclic movement through the model is the equilibrium. In this quadrant, the goals of the organization are clear, as are the plans on how to realize these goals. Improvements are made within the prevailing business model and the existing objectives. There is confidence that the organization can cope with disturbances from outside the organization, using existing measures (Abcouwer & Parson, 2011).

The challenge quadrant constitutes a situation where the organization is highly disturbed by external influences and, therefore, forced out of the equilibrium. In this quadrant, it becomes clear to the organization that the current way of working is no longer applicable, as existing tools and measures to deal with disturbances are no longer sufficient (Abcouwer & Parson, 2011). There is uncertainty about the future of the organization and solutions to overcome the challenge are sought (Thompson, 1967). While a “challenge” might be negative, it can also be an opportunity for the organization to innovate. Either way, the organization must deal with the challenge, but is uncertain how to approach this. Highly creative solutions to the challenge must be found. The main objective is creating a set of realistic solutions that could be used to overcome the challenge. How realistic the solutions are, must be decided by conducting a thorough analysis (Abcouwer & Parson, 2011).

In the new combinations quadrant, there is hope within the organization, because there are multiple solutions to choose from. At this point, the organization must decide which solution should be further developed and then implemented. This decision is not an easy one to make, as it not only entails deciding on a solution, but also to elaborate on why other solutions are not developed further. Often, this decision cannot be made on rational grounds alone, as there is a lot of uncertainty.

Management often has to rely on their intuition and experience to make this decision (Abcouwer & Parson, 2011).

The final quadrant is operationalization, in which upscaling of the previously chosen solution is the challenge. The goal of the organization is clear, but it is often uncertain how this can be achieved. After the choice for a solution has been made, the organization is often not ready to implement the solution throughout the entire organization. Reorganization and rationalization of business processes are needed in order to get back to a state of balance: a new equilibrium (Abcouwer & Parson, 2011). Achieving this requires hard work and commitment to the chosen solution.

2.2.1 Transitions

Besides the cyclic development in the ACoR model, the transitions between the quadrants are also inspired by the adaptive cycle conceptualized in ecology (Abcouwer & Parson, 2011; Abcouwer & Takács, 2020; Gunderson & Holling, 2002). The four functions present in the adaptive cycle (release, reorganization, exploitation, conservation) can be used to characterize the transitions in the ACoR model (Fig. 2) (Gunderson & Holling, 2002). A transition from one quadrant to another does not necessarily mean an actual change in the circumstances of the organization (Abcouwer & Parson, 2011). Instead, it often entails a “gestalt switch” (van Es, 2008), which means that the perception of the situation at hand has been given new meaning, while the situation itself remains unchanged. Recognizing these

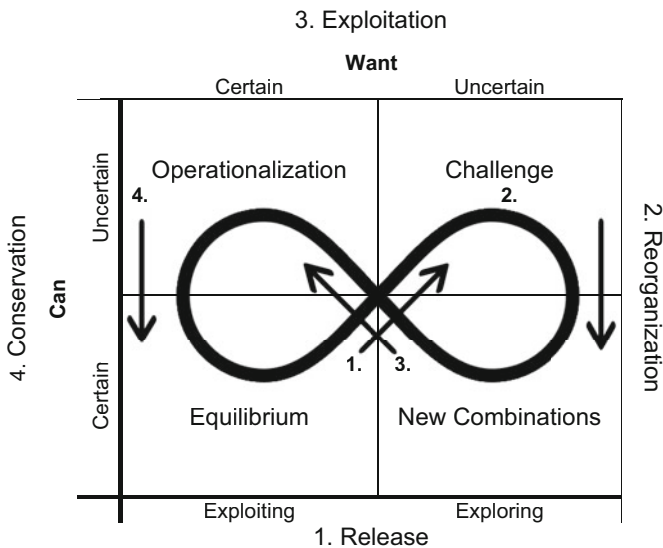


Fig. 2 The four transitions in the Adaptive Cycle of Resilience model. Source: adapted from Abcouwer & Takács (2020)

switches and acting on them ultimately determines the success of the organization in dealing with the challenge (Abcouwer & Parson, 2011).

The first transition is called release and entails a move from the equilibrium to the challenge quadrant. At some point, the complexity of external developments becomes too high for the organization to deal with (Abcouwer & Parson, 2011). When the organization realizes that traditional methods for problem solving are not applicable anymore, a “gestalt switch” occurs (van Es, 2008). This brings the organization from a situation of confidence to one of insecurity. In this transition, the previously accumulated resources are released and tight organization is lost (Gunderson & Holling, 2002).

The second transition is reorganization, the transition from the challenge to the new combinations quadrant. This transition is all about finding solutions to the challenge at hand. If the organization has enough creative capabilities available, it will create a situation where there is optimism and hope about the future of the organization (Abcouwer & Parson, 2011). Finding these solutions requires various resources, which are made available by restructuring the organization (Gunderson & Holling, 2002). When the organization makes a “gestalt switch” from fearful to hopeful about the future, the transition from the challenge to the new combinations quadrant is made (Abcouwer & Parson, 2011).

The transition from the new combinations to the operationalization quadrant is termed exploitation. When the organization makes a definitive decision about which solution to the challenge should be pursued, this transition takes place. Hope for the future is replaced by confidence in the future, due to faith in the chosen solution (Abcouwer & Parson, 2011). The connectedness within the organization increases as the organization tries to exploit the chosen solution (Gunderson & Holling, 2002).

Lastly, the conservation transition brings the organization from the operationalization quadrant back to the equilibrium quadrant. In order to reach a new equilibrium, the solution must be operationalized and gradually improved. The focus is on rationalizing processes, efficiency, and effectivity, achieved by establishing new routines and bureaucratic structures (Abcouwer & Parson, 2011). Confidence in the future is transformed into confidence in the present, as the organization works on scaling the solution. Resources and capital are once again gradually accumulated and stored by the organization (Gunderson et al., 2010). It is important to note that the goal of upscaling the solution is not to reach the same equilibrium as before. The success of the organization is determined by the ability to reach a new equilibrium, based around the implemented solution (Holling, 2001).

2.3 Management and Leadership

Although the ACoR model consists of four transitions, the transition from equilibrium to challenge (release), and the transition from new combinations to operationalization (exploitation) have been identified as having the most impact on an organization (Abcouwer & Parson, 2011; Walker & Salt, 2006). Because these

Table 1 The need for management and/or leadership in the four quadrants of the ACoR model

	Management	Leadership
Equilibrium	X	
Challenge		X
New combinations	X	X*
Operationalization	X*	X

Note: In a situation where both management and leadership are needed, an asterisk is used to indicate which one is considered dominant. Source: adapted from Abcouwer et al., (2019)

transitions entail a movement from left to right and vice versa in the ACoR model, they are deemed the most difficult to achieve. The right side of the model is characterized by uncertainty, curiosity, and experimentation. There is a need for a new vision and argumentation becomes more important than power and control. On the contrary, the left side of the model pursues stability and conservation of this stability. Streamlining and optimizing processes are once again achieved via standardization and the power to impose certain developments (Abcouwer & Parson, 2011).

Since the left and right side of the ACoR model require different approaches, they also require different forms of management (Table 1). While the left side of the model has a focus on a traditional style of management, the right side of the model has a focus on leadership (Abcouwer et al., 2019). Managers follow policy and rules, while leaders use their intuition. A manager uses familiar and tested strategies to tackle a problem, while leaders also use logic, data, and analysis. Therefore, a manager is more rigid as opposed to a leader who is innovative and creative (Turk, 2007). Both management and leadership are needed within an organization, since managers develop and maintain a well-functioning workplace, and leaders challenge the status quo and inspire the organization (Lunenburg, 2011; Turk, 2007).

In the equilibrium, good management is needed in order to keep efficiency and effectivity high. When the organization is faced with a challenge, leadership is needed to find solutions and get the organization through the challenge (Abcouwer et al., 2019). In order to do this effectively, a leader should have the following qualities: willing to take risks, trusted, innovative, creative, and communicative (Capowski, 1994). Finally, when an organization finds itself in the new combinations or operationalization quadrant, both management and leadership are needed. Leadership is dominant in the new combinations quadrant, since important decisions have to be made, while management is dominant in the operationalization quadrant, because the choices made by the leaders have to be optimized (Abcouwer et al., 2019).

3 The Four Traps of the ACoR Model

The ACoR model is a cyclic continuum with multiple states that an organization resides in sequentially, since change never ends (Abcouwer & Parson, 2011). When external influences, or a “black swan,” force the organization out of the equilibrium quadrant, a new “challenge” emerges (Taleb, 2010). To overcome this challenge and to reach a new equilibrium, the organization moves through all four quadrants of the ACoR model (Abcouwer & Parson, 2011). However, organizational change research has shown that there are four traps that might stand in the way of going through the model successfully (Gunderson et al., 2010). Every transition has an associated trap that might occur, “trapping” the organization in that transition. Release is associated with the lock-in trap, reorganization with the poverty trap, exploitation with the isolation trap, and conservation with the rigidity trap (Fig. 3) (Abcouwer & Takács, 2020).

The lock-in trap occurs when an organization is unable to make the transition from the equilibrium quadrant to the challenge quadrant. This happens when an organization is stuck in its old ways and unable to spot the challenge ahead of them, the fear of the unknown freezes the organization in its current state (Abcouwer & Takács, 2020). Due to good results reached in the past, the organization tends to keep doing what it does best and therefore fails to innovate.

Once the organization acknowledges that there is a challenge to be dealt with, the next step is to figure out how to solve it. Solving the challenge requires out-of-the-box thinking to come up with creative solutions. When the organization does not

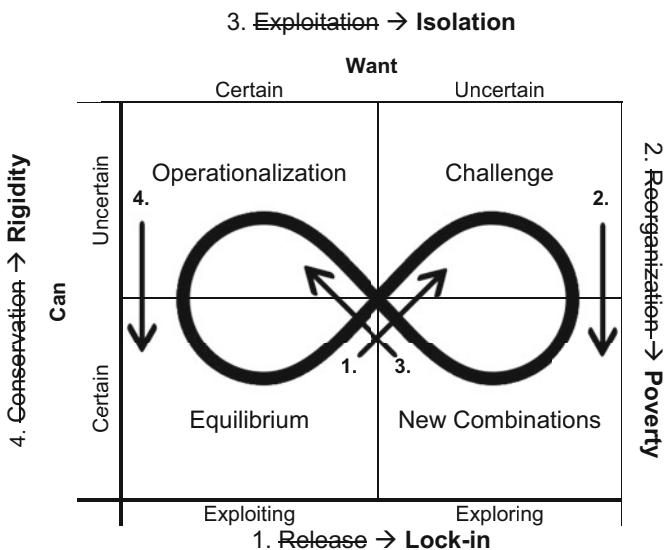


Fig. 3 The four traps of the Adaptive Cycle of Resilience model. Source: adapted from Abcouwer and Takács (2020)

have the capacity for this change or is unable to find solutions to the challenge, the organization is stuck in the poverty trap (Abcouwer & Takács, 2020). Lacking creativity is often caused by poor management, as organizational resources needed for renewal are lacking. This trap stands in the way of a transition from the challenge quadrant to the new combinations quadrant.

Isolation is the third trap and indicates the inability of an organization to transition from the new combinations to the operationalization quadrant. After developing possible solutions for the challenge at hand, the organization must start making decisions on what to implement. When the organization is not able to make these decisions and start moving towards implementation, it becomes isolated (Abcouwer & Takács, 2020). This is often due to a lack of courage and persuasiveness, which is needed to get traction within the organization to start progressing towards implementation.

The rigidity trap arises when an organization encounters heavy resistance against change. Once a decision has been made and the organization starts working towards implementing the chosen solution, it is important that the organization embraces the changes that come with it. The openness of the organization to change is what eventually decides if the solution is going to be successful or not (Abcouwer & Takács, 2020). When there is a lot of resistance against change, the organization is unable to transition from the operationalization to the equilibrium quadrant. This is often caused by the command-and-control culture that many organizations exhibit, which brings various forces against change into practice (Holling & Meffe, 1996).

Overcoming these traps is one of the most difficult and frustrating issues an organization can face (Abcouwer & Takács, 2020; Gunderson et al., 2010). Especially the lock-in trap and isolation trap are hard to deal with, since they require a shift from left to right or right to left in the ACoR model. The left and right side of the model require a different organizational mindset and changing this mindset is not easy (Abcouwer & Takács, 2020). Therefore, literature research was conducted to gain a better understanding of the characteristics of these traps.

3.1 Characteristics of the Traps

The traps previously described originate from ecology, where they were identified by a combination of three properties: (1) capital and potential, (2) degree of connectivity, and (3) level of resilience (Gunderson et al., 2010). Capital is accumulated and stored over time and can be economic, natural, or cultural. Potential is the resources that are available for change. The second property, connectivity, refers to the level of connectedness that is present between internal controlling variables and processes (Holling et al., 2002). This measure reflects the sensitivity of a system to external variation. A low degree of connectivity is associated with the elements of a system being loosely interconnected, making it susceptible to external variability. On the other hand, a high degree of connectivity is associated with elements of a system having tight internal relations, allowing the system to control or mediate

Table 2 Level of the three properties that characterize each of the four traps

	Capital/potential	Connectivity	Resilience
Lock-in trap	Low	High	High
Poverty trap	Low	Low	Low
Isolation trap	High	Low	Low
Rigidity trap	High	High	High

Source: adapted from Gunderson et al., (2010)

external variability (Holling et al., 2002). Lastly, the level of resilience indicates the vulnerability of a system to unexpected or unpredictable changes in the environment (Gunderson et al., 2010).

How the four traps in the ACoR model can be characterized using these three properties can be seen in Table 2, with the level of each property being either high or low. In the following paragraphs, the characteristics of each of the four traps are discussed using the properties in Table 2, supplemented with additional information derived from literature research.

3.1.1 Lock-in Trap

When a complex system is locked-in, it exhibits low capital, high connectivity, and high resilience (Table 2) (Gunderson et al., 2010). Capital is low, due to the focus of the organization on optimizing and streamlining their processes during the equilibrium. Therefore, the organization has lost a lot of resources for renewal, resulting in little room for variation and alternative ways of working. Connectivity is high, since the organization has tight internal relations with a focus on mediating or controlling external variability. These internal relations are focused on maintaining the current organizational processes. Finally, resilience is also high, which means that the organization can resist disturbances and changes in the external environment and can maintain its structure and processes. While the challenge requires the organization to change its processes, the organization keeps doing what it does best (Abcouwer & Parson, 2011).

During the lock-in trap, the organization has accumulated high “sunk-costs,” that will continue to degrade the capital of the organization until depletion. The organization is optimizing its processes, while its return diminishes (Allison & Hobbs, 2004). By the time the organization acknowledges that there is a challenge to be dealt with, there might be too little resources for renewal left to adequately deal with it. As mentioned previously, a challenge is not always bad, it might also provide opportunities. However, these opportunities have an expiration date, if an organization is slow in its response the opportunity might pass them by (Rothmann et al., 2017). While the lock-in trap is often caused by fear for the future, organizational ignorance reinforces this fear. By suppressing knowledge, secrecy, and privacy, the feeling of fear due to a lack of information is only fueled (Roberts, 2013). Because of this, the organization will miss opportunities and it might wither due to slow response to a challenge. For every healthy system life and death, destruction and

renewal are necessary, and ignoring an imminent challenge does not make it vanish (Westley et al., 2009).

3.1.2 Poverty Trap

When an organization finds itself in a poverty trap due to a lack of creativity, it exhibits low capital or potential, low connectivity, and low resilience (Table 2) (Gunderson et al., 2010). There are little resources for renewal available and the potential for change is not realized. Connectivity is also low, since the organization is loosely interconnected and therefore very susceptible to external influences. This leads to low resilience of the organization as unexpected changes in the environment cannot be adequately dealt with, which makes the organization vulnerable to change into different states.

The lack of resources for renewal is often caused by poor management. By not being able to apply divergent thinking, the organization is unable to broaden its view and create new insights (Abcouwer & Takács, 2020). None of the ideas on how to overcome the challenge are deemed good enough and as such they are not taking root or thriving, making the organization unable to change into a new state (Carpenter & Brock, 2008; Gunderson et al., 2010). While raw materials and ideas might be available inside the organization, they are not utilized due to the organization not focusing resources on developing these ideas (Westley et al., 2009). This can be contributed to the loose connections inside the organization, which stands in the way of mobilizing resources and finding solutions to overcome the challenge. The focus needed for adaptation is hindered by a lack of control inside the organization (Carpenter & Brock, 2008). Due to this, the organization is unable to develop creative solutions to deal with the challenge.

3.1.3 Isolation Trap

The isolation trap is considered to be the least well-understood trap (Gunderson et al., 2010). Characteristic of this trap is the presence of high capital or potential, combined with low connectivity and low resilience (Table 2) (Gunderson et al., 2010). Potential is high, because of the availability of possible solutions for the challenge at hand. However, connectivity is low, due to a lack of interconnectedness, resulting in the organization being unable to start implementing one of these solutions. Resilience is also low, because the organizations' inability to start a movement keeps it stuck in its current state, unable to deal with the changing environment. Decisions will have to be made and the parts of the organization that are no longer necessary have to be let go, while retaining what the organization stands for (Westley et al., 2009).

3.1.4 Rigidity Trap

When an organization encounters heavy resistance against change, it can get stuck in the rigidity trap. This trap is characterized by high capital or potential, high connectivity, and high resilience (Table 2) (Gunderson et al., 2010). The potential is high, since a solution to the challenge is being implemented and when this is done successfully, it will result in a new equilibrium. Connectivity is also high; the organization is highly interconnected and the behavior of the people inside the organization is dominated by inward relations among these people. Lastly, resilience is high due to the old organizational configuration persisting, despite being subjected to a wide range of shock or perturbations (Allison & Hobbs, 2004).

The rigidity trap is often the result of the organization having an intensive command-and-control culture; however, other characteristics include (1) not learning from mistakes, (2) a lack of trust throughout the organization, and (3) strong feedback that maintains key aspects of the pre-existing state of affairs (Holling & Meffe, 1996). This causes the organization to be governed by pre-existing rules and procedures that are not suited for accomplishing a highly complex and versatile objective (Gunderson et al., 2010). The architecture of simplicity that is being aimed for often results in a loss of vision and perspective. By hanging on to the old ways of working it is unable to change, making it difficult to bring the organization to a new equilibrium (Westley et al., 2009).

4 Overcoming the Traps in the ACoR Model

In order to create a framework for overcoming the traps described in the previous paragraph, literature research was conducted to find solutions for each trap. This entailed searching literature on how an organization can overcome: fear of the unknown (lock-in), the inability to apply divergent thinking (poverty), indecisiveness and a lack of persuasiveness (isolation), and resistance against changes (rigidity). This research resulted in the identification of four organizational aspects, one for each trap, that are essential for overcoming the traps in the ACoR model. These organizational aspects are: versatility (ambidexterity), creative environment, communication, and organizational culture (Fig. 4).

In short, versatility refers to the organization taking an ambidextrous approach, by looking at the present and future simultaneously (Van Neerijnen, 2016). Creative environment means that the organization should create an environment that supports, encourages, and rewards creativity (Jackson et al., 2003). Communication must be bidirectional and open to employees (Tourish, 2005). Organizational culture is aimed at removing worries, doubts, and other uncertainties with respect to change (Smollan, 2011). These four organizational aspects were used to create a framework, which will be discussed in the next paragraph.

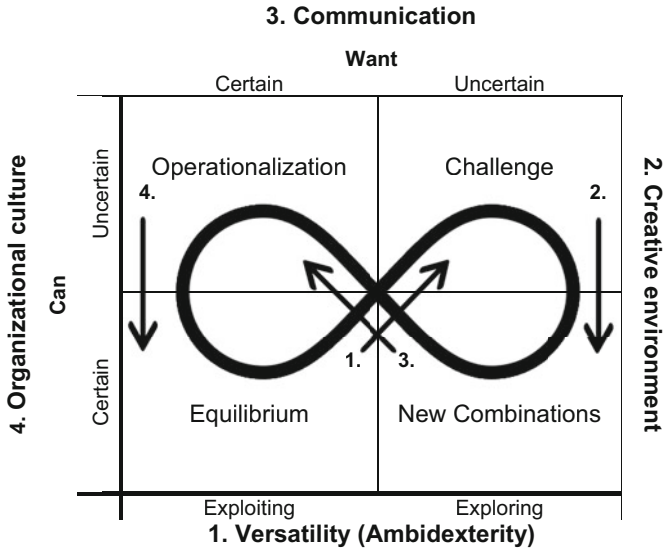


Fig. 4 The four essential aspects for overcoming the traps in the ACoR model. Source: own work

4.1 Theoretical Framework

Using the four identified organizational aspects that are essential for overcoming the traps in the ACoR model, a “management compass” was created to help guide organizations when they are trapped (Fig. 5). The inner circle of the compass contains the four organizational aspects, and the outer circle consists of twelve areas, three for each organizational aspect, that explain what implementing the organizational aspect entails. However, being in a certain part of the compass does not mean that other parts should be neglected, the main focus should be redirected. Ideally, all twelve areas in the compass are present in an organization, to prevent it from becoming trapped in the first place.

4.1.1 Versatility (Ambidexterity)

To overcome the lock-in trap, an organization should be versatile, meaning that an ambidextrous approach is needed. Organizations should focus on both exploiting and exploring business opportunities and markets (Van Neerijnen, 2016). Employees and managers often seek to maintain business as usual in order to reduce cognitive and emotional strain, leading to a focus on the exploitation side (Smith & Lewis, 2011). However, a balance between exploitation and exploration must be found to respond appropriately to changes in the environment (Van Neerijnen, 2016).

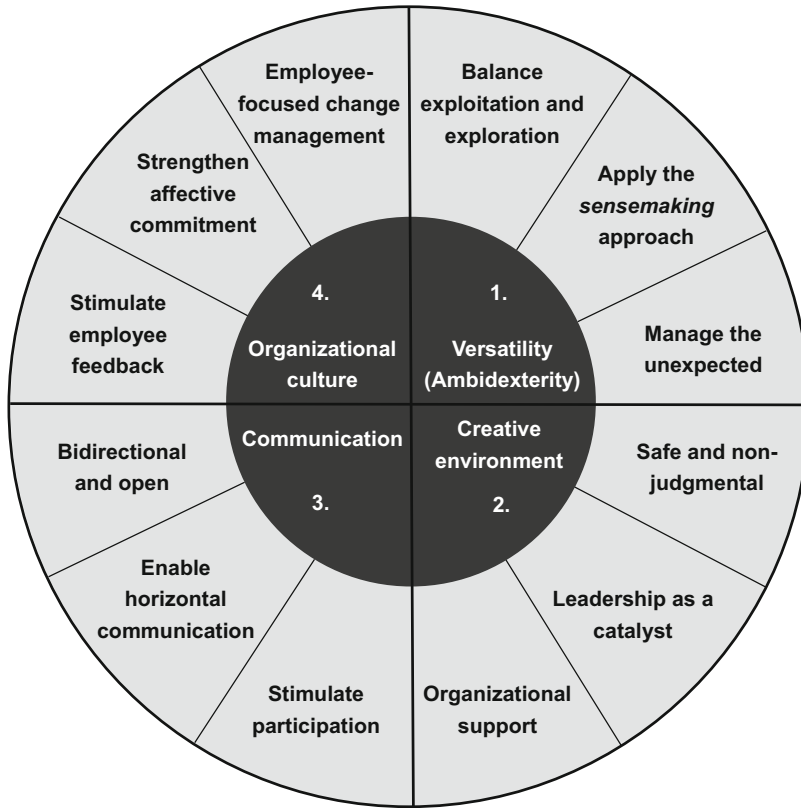


Fig. 5 Compass created to guide organizations that are trapped in the ACoR model. Note: The inner ring contains the four identified organizational aspects essential to overcome the traps in the ACoR model, supplemented by the twelve areas in the outer ring that show what implementing the aspects entails. Source: own work

To prepare for future developments and to not get surprised by them, an organization should apply the sensemaking approach, which is an ongoing process that entails giving meaning to new developments and experiences (Weick, 1995). Instead of ignoring changes that have taken place in the external environment, an organization should try to give meaning to these changes. This is best achieved by letting managers and employees interact freely with each other, which makes it possible to share different viewpoints (Zack, 2000). Once the organization has given meaning to a certain change, it can use this information to prepare for the future.

Organizations should also prepare for the future by attempting to manage the unexpected, which means anticipating unexpected problems (Weick & Sutcliffe, 2007). By tracking small failures in business processes, resisting oversimplification, and remaining sensitive to operations, an organization can deal with unexpected changes as soon as they surface. Often, strong responses to weak signals are needed

to be able to adequately respond to a change (Weick & Sutcliffe, 2007). By making sense of developments and attempting to manage the unexpected, an organization can spot and prepare for challenges instead of being surprised by them.

4.1.2 Creative Environment

When an organization finds itself in a poverty trap, a creative environment should be created to stimulate the creative potential of employees. A creative environment should be non-judgmental to improve the willingness of employees to share their creative thoughts. Employees that share ideas take a risk, since they subject their ideas to evaluation. If the environment feels safe and employees are not afraid of ridicule, they are more likely to share their thoughts (Jackson et al., 2003). A non-judgmental environment also encourages debate, which stimulates creativity as opposed to imposing a single solution (Coulson-Thomas, 2017).

To encourage the sharing of creative ideas, leaders must actively implement strategies in the organization to achieve this. Leadership is a catalyst for organizational creativity, since it can motivate employees to share their creativity through the creation of a shared vision (Agbor, 2008). Also, by creating teams strategically, managing interactions with those outside the team (e.g., encouraging idea-sharing between teams), and developing the right group norms (e.g., praise knowledge sharing), leadership can boost creativity (Kremer et al., 2019). Leadership is therefore needed to establish a creative environment in an organization.

Lastly, it is important that the organization shows support to employees for the sharing of ideas and thoughts. Good ideas often remain unexpressed, because employees feel that they could get into trouble for voicing them or that they might not be taken seriously (Ibrahim et al., 2016; Kremer et al., 2019). When employees feel supported by and connected to the organization, they are more likely to share ideas. This support can be shown by recognizing the employee as the source of an idea, rewarding them for their contribution, or by praising them (Jackson et al., 2003). By creating a safe environment that supports and encourages creativity, an organization can employ the potential of its employees to find solutions to challenges.

4.1.3 Communication

For an organization to overcome the isolation trap, there should be a focus on communication. Improved communication throughout the organization could, for example, allow management to make decisions that are in alignment with the perceptions of their employees (Tourish, 2005). This is needed to create traction within the organization for implementing a solution. To improve communication, it is important that it is bidirectional and open, meaning that information channels are a two-way stream and that management is open to input from employees (Tourish, 2005). Especially vertical communication should allow for upward feedback from

employees, instead of only downward information from management (Tourish, 2005). When managers are open to feedback, employees are often willing to share their thoughts and opinions on possible changes (Gillis, 2006), making it easier to decide on a solution that the organization can get behind. Also, open communication inside an organization can affect the confidence of employees in the decisions that are being made (Tavakoli, 2015).

Furthermore, horizontal communication inside an organization should be encouraged. Horizontal communication promotes cooperation between departments and employees at the same level of an organization, by omitting the “middle-man,” e.g. a manager (Raluca & Romulus, 2018). This type of communication is aimed at shaping opinions, identifying common needs, and it is a way of presenting these to management (Lordache-Platis & Josan, 2009). By leveraging horizontal communication, employees of different departments can share their input on the solutions available and support for a certain solution can be gained. This information can then be shared with management to start a movement towards the implementation of a solution.

Lastly, employees that are included in the decision-making process are more likely to be committed to a course of action, which shows that stimulation of employees to participate in the communication around decision-making is important (Tourish, 2005). To make this possible, structures have to be created that empower and enable employees to participate, and managers with significant experience are needed to guide this (Creedy, 2001). Therefore, it is important that bidirectional, open, and horizontal communication are strived for and that participation in these types of communication is stimulated. In doing so, a solution can be chosen that has support within the organization and a movement towards implementation can be started.

4.1.4 Organizational Culture

Whenever an organization gets stuck in the rigidity trap, attention should be given to establishing an organizational culture in support of change. Organizational culture is a system of shared assumptions, values, and beliefs that together govern how people in an organization behave (Alevesson & Sveningsson, 2015). Organizations that undergo prolonged changes require employees to make these changes a reality, and to address issues along the way (Morin et al., 2016). It is therefore important that there is support inside the organization for these changes. Employee-focused change management can help in creating such a culture, by, for example, focusing on communication, involvement, trust, and removing uncertainty. Employees should be well informed about changes and those affected by these changes should be involved in the process (Canning & Found, 2015). Also, it is important that there is trust in management and there should be clarity around topics such as job loss to remove uncertainty (Chawla & Kelloway, 2004). This will create a higher potential for acceptance of change among employees (Canning & Found, 2015).

Furthermore, to let employees embrace change, there should be a focus on improving their affective commitment (Michaelis et al., 2009). When employees feel a strong connection to the organization and believe in the changes, they are more willing to support and invest in them. Affective commitment is especially needed in turbulent contexts that require employees' continuing contributions (Morin et al., 2016). To improve affective commitment, an organization should give sufficient information and clarity regarding the need and purpose of the change (Kalyal et al., 2010). Also, how a certain change might benefit employees should be made clear.

Finally, employee feedback on the changes that are taking place should be stimulated. This feedback can, for instance, be about the changes itself or the effect that they have on the employee, which gives the employee a chance to voice their opinion or concerns. By stimulating employees to express their thoughts and the organization acting on them were possible, resistance to change can be lowered (van Dijk & van Dick, 2009). Therefore, to decrease resistance against change it is important to be mindful towards the employees inside the organization, so that an organizational culture in support of change can be created.

5 Methodology

In order to perform an initial validation of the theoretical framework (Fig. 5) and to gain further insights, qualitative research was conducted through interviews. These interviews were semi-structured to allow for a discussion with the interviewee, rather than a standard question-and-answer format (Adams, 2015). For the interviews, 19 open-ended questions were formulated. However, based on the answers of the participants, follow-up questions were asked to gain a deeper understanding. The goal of the interviews was to validate each of the four identified organizational aspects deemed essential for overcoming the traps in the ACoR model (versatility/ambidexterity, creative environment, communication, and organizational culture). For this purpose, the participants were asked three questions per organizational aspect. These questions were related to the four transitions of the ACoR model, as these questions could be answered with a short explanation of the model.

In total there were 19 initial questions for each interview: five background questions, 12 questions to validate each of the four organizational aspects, and two questions about the interview itself. Before each interview, the participant was sent an e-mail with a short explanation of the ACoR model and the request to think of a business case (a challenge) to discuss during the interview using the model. More specifically, the request was to think of a case that the participant had been a part of and that has now been completed. A pilot version of the interview was then conducted to make sure that the questions and explanation of the ACoR model were clear. Based on this pilot, some minor improvements were made to the formulation of the questions.

Participants for the interviews were sought within the LinkedIn network of the second author of this research. In doing so, people with various professional

backgrounds and professions were found, which allowed for a broad view on the validity of the four organizational aspects in the framework. The interviewees were selected to cover the different aspects of the framework and as professionals in the various fields. A saturation approach was used for determining the number of interviewees. Therefore, eight participants were interviewed during the first 2 weeks of June 2020 and each interview took approximately 30–60 minutes. The interviews were conducted digitally and were all recorded, consent was asked either via e-mail or before the actual interview. After each interview, the recording was used to create a full transcript of the conversation. These transcripts were then analyzed using Atlas.ti, version 8.4. This program allows the user to mark text and assign a comment, characteristic, or description. In each transcription three things were marked: (1) for each organizational aspect; if the participant considered the aspect to be essential for the corresponding transition in the ACoR model, (2) the explanation/reasoning thereof, and (3) any additional interesting insights.

6 Results

After analyzing the eight interview transcripts, a table was created to show how many participants agreed, partially agreed, or disagreed with a certain organizational aspect being essential for overcoming the corresponding trap in the ACoR model (Table 3). “Partial agreement” means that the participant agreed but had one or more additional comment(s) and/or reservation(s) regarding the organizational aspect. As seen in Table 3, the participants generally agreed with the need for the organizational aspects. One participant disagreed that the organization aspect versatility (ambidexterity) is needed to overcome the lock-in trap. Also, when it comes to the importance of organizational culture to overcome the rigidity trap, four participants fully agreed while the other four had some reservations. The result of the interviews for each organizational aspect is further elaborated below.

Table 3 Summary of the interview transcript analysis

	Versatility (Ambidexterity)	Creative environment	Communication	Organizational culture
Agreed	7	6	6	4
Partially agreed	0	2	2	4
Disagreed	1	0	0	0

Note: For each organizational aspect, the table shows the number of interviewees that agreed, partially agreed, or disagreed with the aspect being essential for overcoming the corresponding trap in the ACoR model

Source: own work

6.1 *Versatility (Ambidexterity)*

Out of the eight participants, seven agreed that versatility (ambidexterity) is essential for overcoming the lock-in trap. The participants explained that finding a balance between the present and future is important to keep the organization alive, the following quotes are a good summary of the participants' thoughts:

That we have processes that help during exploitation is very relevant. However, we cannot keep doing that forever, because then we cease to exist. We need to explore as well, otherwise, we keep doing what we do.

You need people that optimize the current processes, and you need a lot of knowledge for that. On the other hand, you need people that look forward to new things and start implementing new things. After which these can be optimized again.

However, one participant disagreed, stating that not every organization is ready to implement an ambidextrous approach in the organization. The participant said the following:

I think it depends on the organization. Not every organization is ready to implement a bimodal or ambidexterity structure. An organization should first have their exploitation in order before working on their exploration. To organize ambidexterity is too early then.

This participant acknowledged that ambidexterity could be useful for an organization that has its exploitation in order, as the organization can then focus on innovation and move with changes in the environment. Ambidexterity could be a reason for moving the organization to the challenge quadrant, but there could also be other developments that force this transition. Thus, overall, participants considered ambidexterity necessary to overcome the lock-in trap.

6.2 *Creative Environment*

Six participants agreed that a creative environment in the organization is essential for finding solutions for challenges. They noted that the creative capabilities of the employees should be stimulated in order to come up with creative solutions, and the environment is an important aspect of this. Also, people should be given the space to voice their ideas:

I think people are very proactive, they are very good at their jobs. But sometimes they are caught up in the process of being safe or ticking-the-box. . . . People have to be given the space to reprioritize their time and discuss how to solve this crisis.

If you do not organize that (having a creative environment), think about what kind of people you need, and where they can find a good spot in the organization, then you are doomed. The organization won't renew itself.

Two participants had the same additional comment on the need for a creative environment inside the organization. While both participants believed that having

such a creative environment can always help to overcome a challenge, they considered it to be context-dependent if that by itself is enough. The context being whether the organization can and wants to tackle a challenge internally or if external help is needed from, e.g., a consultancy firm.

A creative environment can always help. However, it depends on the challenge if creativity alone is enough to overcome it. . . . In such a case, an external view on the challenge can help to break tunnel vision.

The participants explained that if an organization has enough creative capacity available in the organization, a creative environment is needed to stimulate it. When this is not the case, a creative environment can help to get the “process” of finding solutions started. However, external help is needed to create solutions to the challenge that can be implemented.

6.3 Communication

From the eight participants, six agreed that a focus on communication throughout the organization is essential to overcome the isolation trap. The participants did not only consider communication to be essential for deciding on a solution, but also for including employees in the process, as this is needed to get support for the decision. Including employees in the process means that they can voice their thoughts, but also that they are informed of the fact that a change is going to be made and why:

Communication is needed to get people aware of the fact that changes are going to be made and that these changes are important. . . . So, if a choice has been made, which solution is going to be implemented, it is essential that people are included. I think that a focus on communication is the only way to do that.

The human aspect is very important, that people are able to express their thoughts. Then you’ll get a lot of options on the table because everyone looks differently at the future. . . . These options can then be discussed together, which one to apply.

While the remaining two participants partially agreed that communication is important, both had an additional remark. Firstly, it was mentioned that communication should be focused on aligning the interest of enough people inside the organization: “If you don’t have the majority of the organization behind a decision, then you can communicate all you want, but change won’t occur.” While the participant considered this to be the most important factor for overcoming the isolation trap, communication was said to be the only way to achieve this. Secondly, it was mentioned that there is a boundary when it comes to compromising in order to get people behind a change: “It is important to keep believing in that what you’re trying to achieve,” meaning that a decision should not solely be made based on the number of people that support it. The best possible decision should be made, even though not everyone might like this or agree with it.

6.4 *Organizational Culture*

Out of the four organizational aspects, organizational culture had the most partial agreements. Half the participants fully agreed that a focus on the organizational culture is essential for overcoming the rigidity trap, while the other half had some reservations. The participants that agreed, noted that the organizational culture is essential, since employees are the ones that carry-out the change. Uncertainty and reservations that employees might have due to a change should be reduced wherever possible:

Culture, in the end, comes down to people and people are the value of an organization. . . . When employees feel cared for, they want to do their best, because they know the organization is also there for them.

If you want to do it right (implement changes), you need to focus on the organizational culture. Know why people are working for you and what makes that they can accept the change. . . . If you enforce change, then people will lose some of their loyalty which is bad for e.g. their performance.

The additional comments of the remaining four participants came down to two things. Firstly, one participant commented that the organizational culture is always important: “I think that the organizational culture is essential in every quadrant,” meaning that without a strong organizational culture, the organization would have a difficult time overcoming a challenge in general. Secondly, when asked about the need for a focus on organizational culture to overcome the rigidity trap, the remaining three participants did not immediately agree or disagree. It seems that there was some unclarity about the intended meaning of organizational culture, while the view on what is essential for overcoming the rigidity trap was the same for the interviewer and the participants. In their explanation, all three mentioned that they considered a focus on the people inside the organization to be important for reaching a new equilibrium. One participant said:

I think that organizational culture is too broad of a term. . . . I think that guiding people is important, listening to people is important, and being understanding towards people is important. Change affects everybody and people will not change just because you say that they must. They need time to process it and that process is different for everybody.

In their opinion, there should be a focus on the people within the organization to get them behind the change, which is also what “a focus on the organizational culture” entails. One of the participants mentioned that organizational culture as a term is quite broad. Therefore, the term should be changed to one that better encompasses the intended meaning.

7 Discussion

In general, the results of this research confirm that the four organizational aspects that were identified are essential for overcoming the traps in the ACoR model. Additionally, a couple of conclusions and insights can be deducted from the previous

results. First, while one participant disagreed with the need for versatility (ambidexterity), it seems that this disagreement was aimed at this aspect being essential for the transition from equilibrium to challenge. Therefore, it is possible that the participant has a different opinion when it comes to the need of the aspect to overcome the lock-in trap. Second, having a creative environment inside the organization to overcome the poverty trap is mostly needed when the organization wants to tackle a challenge internally. When this is not the case, the organization could also hire external help to do so. Thirdly, participants have said multiple times that they considered the human aspect in organizations to be important during changes and challenges. This indicates that to overcome a challenge, it is important to guide employees and other staff through the whole process, from start to finish. Lastly, there was unclarity with some participants about the meaning of the term “organizational culture”. This resulted in confusion with respect to the aspect being essential for overcoming the rigidity trap, while the explanation of what these participants deemed important aligned with the intended meaning of the term. Because of this, the terminology seems to require a change into one that is more descriptive to prevent confusion, e.g. organizational support instead of organizational culture.

Furthermore, there are some limitations to this research that should be acknowledged. To do an initial validation of the current framework, people with different professional backgrounds were interviewed. While this allowed for a broad view on the framework, it also made the analysis of the results more difficult. For example, challenges in a privately-owned company are most likely different from those in a publicly owned company. However, this approach was chosen since the ACoR model is highly versatile, and, therefore, the established framework should be widely applicable as well. Another limitation was the relatively small group size of eight participants. However, this group size was deemed sufficient for a first validation of the framework, and future research will take more participants into account. Finally, the initial validation of the framework was focused on the four organizational aspects present in the inner ring. The outer ring, consisting of 12 areas, was not specifically validated. Nevertheless, by validating the inner ring, the outer ring can be considered valid as well, since the outer ring is meant as an elaboration on the intended meaning of the inner ring.

8 Conclusion

This research was focused on the four traps in the ACoR model and how these traps can be overcome by an organization. Literature research was conducted to find possible solutions and has resulted in the creation of a framework to assist organizations in overcoming the traps. For each trap, an organizational aspect was identified that is essential for working through it: to overcome the lock-in trap an organization should focus on versatility (ambidexterity), the poverty trap requires the creation of a creative environment, the isolation trap needs a focus on communication throughout the organization, and, lastly, the rigidity trap can be overcome

by establishing an organizational culture in support of change. To initially validate these findings, eight interviews were conducted. The results of these interviews were promising, as they largely confirm that a focus on these aspects is indeed essential. Only the intended meaning of the organizational culture aspect was unclear to some of the participants and, therefore, seems to require a change in terminology to avoid confusion. In conclusion, the initial findings of this research suggest that the identified four organizational aspects are essential for overcoming the traps in the ACoR model. The framework created with these four aspects (Fig. 5) should serve as a guide to assist organizations when they get caught in one of the traps.

9 Future Work

As previously mentioned, the goal of this research was to assist organizations in realizing a successful change by identifying how the traps in the ACoR model can be overcome. This has resulted in the identification of four organizational aspects that an organization should focus on when trapped. However, these aspects are quite broad, since they are aimed at the entire organization. As mentioned in the discussion, the participants considered guiding people within the organization to be very important for realizing change. Also, Sect. 2.3 shows that management and/or leadership are needed at different moments in a change process. This indicates that, depending on the situation or phase an organization finds itself in, different types of people and behaviors of those people are needed. Therefore, future research should be aimed at identifying what the implications of the four organizational aspects are for people with different functions and tasks within the organization. For example, what does the implementation of these aspects mean for and require from managers, leaders, employees, and other groups within the organization? Understanding this can make the implementation of the aspects easier and increase the chances of success.

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Diagnostic Instrument: How to Measure Values Congruence and Management Culture?



Jolita Vveinhardt and Povilas Foktas

Abstract The main purpose was after adapting Q-POVC and Q-MC-CSR questionnaires, to form the diagnostic instrument “Questionnaire of values congruence and management culture (Q-VC-MC)”, testing it in a relatively small sample. The formation and adaptation of the questionnaire consisted of the following stages: analysis of scientific sources; analysis of the already existing instruments, merging of selected instruments; exploratory research using the adapted instrument; psychometric analysis of the obtained results; rectification and correction of deficiencies; preparation of a basic tool for conducting surveys. In order to identify the validity of the adapted diagnostic instrument, a questionnaire survey was conducted, involving employees of 303 Lithuanian business organizations. The diagnostic instrument “Questionnaire of values congruence and Management Culture (Q-VC-MC)” was developed by adapting the following questionnaires: “Questionnaire of Personal and Organizational Values Congruence for Employee (Q-POVC-115)” and “Questionnaire of Management Culture in Preparedness of the Organisation to Become Socially Responsible (Q-MC-CSR-177)”. The identified high psychometric characteristics of the diagnostic instrument “Questionnaire of Values Congruence and Management Culture (Q-VC-MC-110)” show that it is suitable for measuring the set even in a relatively small sample.

Keywords Values congruence · Management culture · Diagnostic instrument

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1 Introduction

The values of the organization, which influence the formation and progression of the organizational culture, play a major role in all this process. In organizations, shared values are fundamental to efficiency because they help people choose how they will behave and encourage them to create expectations as to what actions are acceptable (Shortell et al., 1995). These values must be known and promoted in order to achieve better results for the organization.

Values are guidelines on employee behaviour, and goals are only foreseeable aspirations or expectations. Congruence of values between the person and the organization is a natural and at the same time artificial process that must be supported and shaped by the organization's management (Vveinhardt & Gulbovaite, 2012). It can be stated that individuals have common values with organizations, the coincidence or differences of which may be due to natural or artificial variables (Edwards & Cable, 2009).

One of the factors most analysed with regard to the congruence of values is identification with the person's organization (Smidts et al., 2001; Choi and Price, 2005; Kolodinsky et al., 2008; Edwards & Cable, 2009; Gonzalez, 2016, etc.). Employees with a firm and strong identification show greater emotional commitment to the organization than other employees. The second most analysed aspect is communication and trust (Amos & Weathington, 2008; Kolodinsky et al., 2008; Zenker et al., 2014, etc.), which is inseparable from congruence between individual and organizational values. It increases mutual understanding and reduces uncertainty. Communication and trust foster coherence and collaboration among members of the organization. These aspects increase the probability that employees will share objectives and agree on works, which helps avoid various conflicts. The contribution of values congruence to job satisfaction is also noticeable (Ramlall, 2003; Kolodinsky et al., 2008; Edwards & Cable, 2009; Gehman et al., 2013, etc.). The congruence of values protects against burnout and general dissatisfaction with work or life in general.

When analyzing research results, it can be found that congruence of values can provide more than just positive factors and outcomes (Sheldon & Elliot, 1999; Verplanken, 2004; Kolodinsky et al., 2008; Edwards & Cable, 2009, etc.). Negative factors are observed when the level of congruence of values between the person and the organization is completely low or when incongruence occurs (Gehman et al., 2013; Gonzalez, 2016, etc.). The incongruence between personal and organizational values makes individuals cynical and suspicious; it reduces the commitment of employees to change (Erkutlu & Chafra, 2016). Such mismatch of values also encourages employee dissatisfaction and decreased commitment and increases the desire to leave the organization (Leiter et al., 2009). The congruence of values has a significant impact on productivity as well as on behaviour and psychological health (Ferris et al., 2008), which means that this relationship is incredibly important not only for the success of the organization, but also for the employee's personal well-being.

Although management culture and congruence of values are closely related, the review of literature has shown that there are no tools developed and applicable in practice to determine the level and relationship of value congruence and management culture. Until now, only separate, questionnaires have been used. For this reason, efforts are being made to form an instrument that aims to jointly assess the culture of managerial staff, management processes, working conditions and to determine the level of congruence between the person and the organization, assess personal values and the congruence phenomenon. The suitability of the newly formed instrument was assessed during the exploratory study.

This study is exploratory in nature; therefore, the purpose was after adapting Q-POVC and Q-MC-CSR questionnaires, to form the diagnostic instrument “Questionnaire of values congruence and management culture (hereinafter referred to as Q-VC-MC)” by testing it in a relatively small sample.

The formation and adaptation of the questionnaire consisted of the following stages: analysis of scientific sources; analysis of the already existing instruments, merging of selected instruments; exploratory research using the adapted instrument; psychometric analysis of the obtained results; rectification and correction of deficiencies; preparation of a basic tool for conducting surveys.

2 Research Methods

The diagnostic instrument Q-VC-MC was formed by adapting the following questionnaires: “Questionnaire of personal and organizational values congruence for employee (Q-POVC-115)” (Vveinhardt & Gulbovaite, 2016, 2017, 2018), which includes 4 scales and 17 subscales, and the “Questionnaire of Management Culture in Preparedness of the Organization to Become Socially Responsible (Q-MC-CSR-177)”, which consists of 6 scales and 27 subscales (Vveinhardt & Andriukaitiene, 2014, 2015).

Questionnaire of Personal and Organizational Values Congruence for Employee (Q-POVC-115) is designed for identifying the problem of compatibility between personal and organizational values. The scales for determining personal and organizational values are divided into seven subscales, which help to identify the manifestation of separate groups of values: economic, social, professional, ethical, aesthetic, physical, spiritual. The manifestation of all elements is assessed on a Likert scale from 1 to 5. The verification of this questionnaire was performed with a sample of size $N = 374$. The obtained results showed high psychometric characteristics of the questionnaire.

Questionnaire of Management Culture in Preparedness of the Organization to Become Socially Responsible (Q-MC-CSR-177) is designed for determining the level of the constituents of management culture in organizations in relation to corporate social responsibility. The answers to the questions are given on a Likert scale from 1 to 5. The verification of this questionnaire was performed with various

samples. After interviewing 1717 respondents, the authors obtained high characteristics of the instrument.

The study involved a total of 313 respondents. There were 303 fully and properly completed questionnaires; thus, a sample of 303 study participants is further analysed. Before starting the survey, study participants were introduced to the research problem, purpose, and objectives. The organizers of the study ensured that the collected data would be used only for scientific purposes and that the respondent could voluntarily terminate participation in the survey at any time. Research participants answered questions on a Likert scale with a possibility to choose from 1 to 5, where 1 means “not at all important” and 5 means “very important”. After conducting the survey, the data of the empirical study were processed using the statistical program SPSS v. 21 and R studio.

3 Results

To determine the reliability of the questionnaire, a model of the analysis of psychometric properties was used. Cronbach's alpha, dispersion values (%) coefficients were calculated, as well as Factor analysis (L) was performed and the Overall correlation (r_{itt}) was calculated. Our initial version of the instrument was formed by integrating all scales and subscales from the Q-POVC-115 questionnaire. In the first round of our instrument formation, from 115 items of the Q-POVC-115 questionnaire, 105 items were selected, of which 65 items remained after the second round. Analogous steps were performed with the Q-MC-CSR-177 questionnaire; i.e., in the first round, out of 177 items of this questionnaire, we integrated 58 items, leaving 45 items after the second round. Thus, the first version of the instrument included a total of 163 items, but after performing the factor analysis, 53 of them were rejected. The diagnostic instrument Q-VC-MC consists of the following scales: approach to personal and organizational congruence of values; personal values; organizational values; effect of values congruence on you and the organization; culture of managing staff, culture of organizing management processes, culture of managing working conditions. Finally, the completed questionnaire consists of 7 scales, 27 subscales, and 110 items (excluding socio-demographic indicators). Tables 1 and 2 show the psychometric characteristics of the instrument, presenting the indicators of values congruence (Table 1) and management culture (Table 2) separately, when the part of values congruence in this instrument includes 65 items and the part of management culture, 45 items.

In order to reveal the correlation between the scales and subscales of the survey and to determine its reliability, the Cronbach's alpha coefficient was calculated. If the values of this coefficient for the elements of the questionnaire (scale or subscale) are closer to 1, then it can be said that the relevance of the selected elements is higher, the questions are more accurate. In a very common case, the authors indicate different confidence limits and reliability may differ depending on both the nature of the question and the quantity of questions in the element. For this reason, the values

Table 1 Psychometric analysis of values congruence scales, *N* = 303

	*I	**II	Dispersion values, %	Cronbach's alpha	Factor loading (L)			Overall correlation (r/fit)		
					mean	min	max	mean	min	max
ACV	5	3	85.66	0.92	0.93	0.91	0.93	0.79	0.76	0.81
PV	EcV	5	63.00	0.76	0.78	0.53	0.89	0.49	0.27	0.76
	SoV	9	58.43	0.79	0.76	0.59	0.87	0.47	0.32	0.71
	MoV	4	73.12	0.88	0.86	0.84	0.86	0.64	0.55	0.76
	SpV	5	68.89	0.85	0.83	0.78	0.86	0.58	0.46	0.73
	PrV	12	55.18	0.80	0.74	0.62	0.82	0.44	0.30	0.67
	AeV	3	72.40	0.79	0.85	0.81	0.88	0.59	0.54	0.67
	PhV	4	72.81	0.81	0.85	0.84	0.87	0.59	0.55	0.63
	EcV	5	49.79	0.64	0.71	0.67	0.74	0.33	0.23	0.47
	SoV	9	66.63	0.87	0.82	0.76	0.86	0.58	0.48	0.72
	MoV	4	65.75	0.83	0.81	0.78	0.85	0.54	0.42	0.65
	SpV	5	66.91	0.83	0.82	0.80	0.84	0.56	0.52	0.61
	PrV	12	61.13	0.84	0.78	0.73	0.83	0.51	0.35	0.61
AeV	3	66.41	0.74	0.81	0.77	0.87	0.50	0.38	0.57	
PhV	4	72.81	0.80	0.85	0.81	0.88	0.59	0.55	0.77	
EVC	16	6	69.78	0.91	0.83	0.75	0.87	0.64	0.53	0.75
Total:	105	65								

Notes: The table made by authors

Scales: ACV—approach to personal and organizational congruence of values; PV—personal values; OV—organizational values; EVC—the effect of values congruence on you and the organization

Subscales: EcV—economic values; SoV—social values; MoV—moral values; SpV—spiritual values; PrV—professional values; AeV—aesthetic values; PhV—physical values

Items: *I—number of statements in subscales (I round) before factor analysis (i.e., 105); **II—number of statements in subscales (II round) after factor analysis (i.e., 65)

Table 2 Psychometric analysis of management culture scales, *N* = 303

	*I	**II	Dispersion values, %	Cronbach's alpha	Factor loading (L)			Overall correlation (r/fit)		
					mean	min	max	mean	min	max
CMS	GC	5	71.32	0.90	0.84	0.78	0.89	0.64	0.52	0.78
	KM	5	62.02	0.78	0.78	0.65	0.90	0.48	0.21	0.78
	PB	5	76.84	0.90	0.88	0.87	0.89	0.69	0.65	0.74
COMP	LS	7	59.86	0.86	0.77	0.70	0.87	0.51	0.29	0.75
	OR	5	64.69	0.72	0.80	0.76	0.88	0.47	0.33	0.54
	RO	5	53.56	0.55	0.73	0.60	0.82	0.30	0.17	0.43
CMWC	RE	5	57.26	0.74	0.75	0.66	0.83	0.43	0.31	0.56
	WE	6	64.04	0.85	0.79	0.61	0.88	0.54	0.35	0.80
	WO	5	75.46	0.90	0.87	0.84	0.90	0.67	0.61	0.82
Total:	WR	5	58.83	0.82	0.76	0.62	0.82	0.48	0.33	0.62
	WS	5	52.49	0.54	0.72	0.69	0.78	0.29	0.22	0.33
Total:		58								
		45								

Notes: The table made by authors
 Scales: CMS—culture of managing staff; COMP—culture of organizing management processes; CMWC—culture of managing working conditions
 Subscales: GC—level of general culture of managing personnel; KM—level of knowledge in management science; PB—personal and business characteristics;
 LS—level of leadership skills; OR—optimal regulation of management processes; RO—rational organization of managerial work; RE—reception of
 stakeholders, conducting meetings, telephone conversations, etc.; WE—working environment level (interior, lighting, temperature, cleanliness, etc.); WO—
 level of work organization; WR—work and rest mode, relaxation options; WS—Work safety, sociopsychological microclimate
 Items: *I—number of statements in subscales (I round) before factor analysis (i.e., 58); **II—number of statements in subscales (II round) after factor analysis
 (i.e., 45)

Table 3 Correlation relationships between values congruence and management culture scales

	CMS	COMP	CMWC
ACV	0.662**	0.577**	0.654**
PV	0.236**	0.326**	0.267**
OV	0.666**	0.611**	0.612**
EVC	0.629**	0.519**	0.566**

The table made by authors

**Correlation is significant at the 0.01 level

of this coefficient should be treated with more caution. The calculated Cronbach’s alpha values are distributed between $\mu = 0.54$ and $\mu = 0.92$ (Values congruence—maximum percentage is 0.92; minimum, 0.64, Management culture—maximum percentage is 0.90; minimum, 0.54). According to George and Mallery (2003), the allowable coefficient change in testing theory is between 0.5 and 1. In this case, it can be said that the relationship between the elements is perceived as strong.

Another important index was also calculated—the Dispersion values (%) explained. This index indicates whether one element of the questionnaire is similar to the remaining elements of the questionnaire. The calculated dispersion values are distributed between 49.79% and 85.66% (Values congruence—maximum percentage is 85.66; minimum, 49.79, Management culture—maximum percentage is 76.84; minimum, 52.49). The calculated dispersion value cannot be less than 10%, otherwise it indicates that there are invalid objects in the item that need to be replaced or adjusted. The calculated dispersion values suggest that the elements of the questionnaire are similar and consistent. For this reason, none of the scales should be removed from the questionnaire.

One of the most important parts of the psychometric method is Factor Analysis (L). Its coefficient shows the coherence of the statistical relationship between the variables. Izquierdo et al. (2014) propose to choose values not less than 0.3 and 0.4. By performing Factor Analysis and obtaining one or more variables that are similar and correlate with all other elements of the questionnaire, it is possible to reduce the number of variables and optimize the questionnaire. After the Factor Analysis, it was decided to use a coefficient of at least 0.3. Items with lower values were deleted from the questionnaire or adjusted to more comprehensible ones.

The mean of the overall correlation (r/itt) should not be lower than 0.2, as the value lower than 0.2 indicates that an inappropriate statement was detected on the subscale being checked.

Correlations were calculated between CMS, COMP, CMWC, and ACV, PV, OV, EVC (Table 3). Using the Pearson correlation coefficient, the values were interpreted as follows: values higher than 0.70 show very strong correlation; from 0.40 to 0.69, strong correlation; from 0.30 to 0.39, moderate correlation; from 0.20 to 0.29, weak correlation (Schober et al., 2018). Correlation results for all combined scales show statistically significant relationships, although the Pearson coefficient value fluctuates from weak to strong. However, when analysing the correlation between the management culture part and the values congruence part (Q-POVC and

Table 4 CFI, TLI, RMSEA, and SRMR indexes

CFI	TLI	RMSEA	SRMR
0.813	0.802	0.057	0.059

The table made by authors

Q-MC-CSR), the correlation mean of 0.686** was found. This shows a strong link between these parts of the questionnaire.

The following values were also calculated (Table 4): Comparative fit index (CFI); Tucker–Lewis index (TLI). These values help to clarify the coherence and integrity of the created instrument. For the instrument to be reliable, these values should be respectively: $CFI \geq 0.90$, $TLI \geq 0.90$, $RMSEA \leq 0.08$; $SRMR \leq 0.08$ (Hu & Bentler, 2009). RMSEA and SRMR values indicate the integrity of existing elements. CFI and TLI values, although not particularly high, indicate compatibility of the instrument.

4 Discussion

The methodological characteristics of the adapted instrument are designed to measure the congruence of values and management culture. They have been statistically validated—the results obtained prove their suitability (George & Mallery, 2003; Hu & Bentler, 2009; Shi et al., 2019; Boateng et al., 2020; Boruzs et al., 2020; etc.) for use in subsequent studies. When analysing the correlation between the part of management culture and the part of values congruence, statistically significant relationships were found. In determining the validity of this instrument, it is indeed difficult to compare the data with other similar instruments. Such instrument not only identifies the congruence of values between the individual and the organization, but also reveals its connection and expression with the management culture in the organization. It is one of the first instruments of this type in the field of management science. In particular, it differs in its structure and is made up of two other already validated instruments. This questionnaire enables accurate identification and distribution of personal and organizational values into specific categories, while other instruments attempt to interpret and classify values in the course of research (Ihm & Baek, 2021).

5 Conclusions

We believe that the statistical verification of two questionnaires combined into one provides evidence that allows to state that the obtained overall result meets the requirements. This questionnaire helps not only to identify the organization’s management culture but also to measure value congruence in its context. The value congruence and management culture questionnaire was verified by conducting the

exploratory study, the psychometric analysis results of which demonstrate that the diagnostic instrument “Questionnaire of values congruence and management culture (Q-VC-MC-110)” is suitable for measuring the intended whole.

Using the questionnaire, it should be taken into account that it measures not only employees’ reactions but also the ones of the managerial staff. Therefore, applying it, the statements addressed for all staff and the statements for managers (e.g., Level of knowledge in management science) should be strictly separated so that the results are not distorted. Furthermore, it is likely that the results in other countries may differ depending on the cultural context, given that European management and value assumptions may not always be accepted in the same way (Schneider, 1988; Leung, 2009; Valitova & Besson, 2018). Therefore, when adapting the questionnaire, the national context should be sensitively taken into account. Although there are some limitations, the instrument is suitable as a convenient tool that does not require large resources for researchers, seeking to assess the compatibility between the organization’s management culture and values.

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The Possibilities of the Optimization of Managing Organizations of Education Sector



Zuzana Stoličná and Jana Barjaková

Abstract The article focuses on the analysis of the current state and determinants influencing the way of management of directly managed organizations of the Ministry of Education, Science, Research, and Sport of the Slovak Republic. Simultaneously, the article points out the possibilities of optimization of the management of directly managed organizations within the founding competence of the Ministry of Education, Science, Research, and Sport of the Slovak Republic resulting from the implemented analysis. The aim of the article is to clarify the current state and determinants affecting it and, based on the analysis, to point out the possibilities of effective optimization of the management of this type of organizations. Within the processing of the information, several methods of analyzing the materials, data, and legislative documents are applied, as well as practical knowledge and experiences from the particular government department. The main findings of the article are budgetary planning is problematic, organizations use several management tools independently of each other, the effectiveness of which is questionable, and there is much space for the application of optimization measures that may streamline the management of organizations and reduce the budgetary burden. A set of management optimization possibilities applicable to this specific type of organizations in a given environment is one of the main outputs of this article.

Keywords Ministry · Budgetary and contributory organizations · Management · Public administration · Analysis

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1 Introduction

Management in public administration is an important element of governance, as it is the management of publicly funded organizations. Any public administration organization, as an organization financed from state budget resources, should use financial resources appropriately, transparently, and within the established rules (Hughes, 2003).

This article is focused on the management of organizations in the founding competence of the Ministry of Education, Science, Research, and Sport of the Slovak Republic (hereinafter “the Ministry”). These organizations are set up by the Ministry or the law and are linked to the Ministry’s budget, and the Ministry is politically and financially responsible for them. The Ministry represents a specific ministry managing three different areas of activity—education, science and research and sports. The Ministry’s scope has a direct impact on a relatively wide section of the professional and lay public, as it deals with education from pre-primary through primary, secondary, and tertiary to lifelong, with a direct impact on students and teachers as well as other professional staff. In the field of science and technology, the Ministry is responsible for financing science and technology, including ensuring and controlling the effective use of state budget funds spent on science, state research and development programs, state research and development, infrastructure development programs, international scientific and technical cooperation (Minedu, 2020a). The competencies of the Ministry in the field of sports are defined in Act on sport, and it supports the development of sport for all, including the disabled, and carries out a number of other activities. To fulfill the set tasks, the Ministry is authorized to establish budgetary and contributory organizations. In total, there are 16 of them, and the average annual total budget for last 6 years is € 92 million.

Focusing on the Ministry is important because its activities have an impact on education with students, teachers, and other staff, scientists and investment in science and research as well as sportsmen, sports clubs and representation, and last but not least on the staff of these organizations. In addition, it is currently possible to identify some problems in the management of these organizations, for example, in financial planning, which is a serious problem due to the financing of these organizations from the State budget. Unless the management of these organizations is effective, they are not only unable to perform their tasks properly, but it negatively affects the State budget and the management of public finances.

The aim of the article is to clarify the current state and determinants influencing the method of management and, based on the performed analyzes, to point out the possibilities of effective optimization in the management of budgetary and contributory organizations within the competence of the Ministry. The aim of the article is to point out the current problems in the management of this type of organizations in the conditions of the Ministry and the possibilities of effective optimization in the management of these organizations.

In order to achieve the main goal, the following sub-goals are set:

1. To clarify the basic framework for the establishment and the legislative framework limiting the activities of budgetary and contributory organizations within the competence of the Ministry.
2. To find out which management tools are currently applied in practice in management of budgetary and contributory organizations of the Ministry.
3. On the basis of specific data to draw conclusions about current problems and possibilities of optimization in the management of budgetary and contributory organizations of the Ministry.

In 2019, a pilot operation of a unified form of Contracts was implemented as the main tool for streamlining and clarifying the management and financial management of budgetary and contributory organizations of the Ministry. Based on it, we formulate the following hypothesis: The introduction of a new unified, extended form of Contracts results in improved financial planning and eliminates the multiple increase and drawing of the budget of directly managed organizations without proper justification.

Due to the fact that budget and contributory organizations established by the Ministry are financed or co-financed by the State budget, it is necessary to point out that optimization is the necessary factor in streamlining the management of these organizations. Efficient and economically viable management of these organizations brings not only the achievement of the objectives but also increasing the quality of provided services. Simultaneously setting limits for these organizations can have a positive impact on the Slovak State budget and efficient expenditures within the limits of budgetary rules without the need for the state debt increasing.

Specific facts and management settings of these organizations are the basic criteria for processing the practical aspect of this article. Within the processing of information, several methods of working with text, data, and legislative documents are used, as well as practical knowledge and experience from the government department. A set of management optimization options applicable to selected organizations in the given environment is one of the outputs of this article.

From scientific methods, analytical and descriptive methods are used to approximate and analyze the current and legal situation. Analysis, synthesis, abstraction, and comparative methods are used to examine the factors and elements influencing the management and optimization possibilities of budgetary and contributory organizations. The starting materials are mainly publicly available sources—analyzes, implementation reports, deductions for the fulfillment of optimization tasks and legislation, specifically generally binding legal regulations and departmental internal regulations.

To approximate the current state of directly managed organizations, generally, binding legislation is examined, determining the conditions for the establishment of directly managed organizations and the definition of which organizations fall within the scope of the review. Due to the focus on the management of public resources, it is necessary to find out what budget these organizations manage. In particular, the budget of the Ministry and its organizations and the state final account for the last 6 years is used. Legislation is a very important element in governance in public

administration because it significantly limits it. To find out management tools currently applied in the management of these organizations, the method of hiring the director of organizations and the founding documents of organizations are analyzed. Another source of management tools is internal legislation, which allows the Ministry to determine unilaterally the rules for organizations. In addition to internal legislation as a flexible management tool for the management of these organizations, there is a system of Contracts that allows the Ministry to assign specific tasks to the organization and to finance their performance. This tool is applied to the conditions of each organization and applied to all government departments in Slovakia. Regarding the possibilities of optimization in the management of organizations in the education sector, past activities and current incentives for change are analyzed.

This article differs from the available literature in focusing on a specific ministry and its organizations and in providing an overview of specific managerial problems from application practice that the Ministry deals with. The knowledge of the professional literature is used to apply optimization measures that can eventually be used in other government departments. The main findings of the article are budgetary planning is problematic, organizations use several management tools independently of each other, the effectiveness of which is questionable, and there is much space for the application of optimization measures that may streamline the management of organizations and reduce the budgetary burden.

The first part of the article presents the current state of directly managed organizations. The second part points out the determinants influencing the management of these organizations. The third part of the article deals with the currently applied management tools of directly managed organizations. In the final part, the article summarizes the recent intentions of optimization in the management of directly managed organizations, possible sources of proposals for the implementation of optimization measures and tries to point out other optimization possibilities in the management of this type of organizations.

2 Theoretical Background: Public Administration and Optimization

The public sector is represented in practice by public administration. Organization of public administration is funded from the public budgets. The public sector is an important part of the national economy. The public sector provides services for its clients (citizens), which serves to meet the needs of the public funded from the public budgets (Nahodil, 2014).

The public sector is determined in the Slovak legal environment by the Act on Budgetary rules in Public Administration. Under this legal regulation, the public sector is created by the state with its state budgetary and contributory organizations and other entities registered in the government with their established budgetary and

contributory. In the Slovak Republic, the reform of public finance management is implemented; its aim is to enhance the budgetary efficiency of public expenditure management and financial management of government activities (Košovská et al., 2014).

The Act on Budgetary Rules of Public Administration is also a basic legislation regulating the establishment of budgetary and contributory organizations and their management. The Founder—any ministry may establish a budgetary organization for the performance of its tasks within the scope of its competence. Necessary documents to found the organization are the draft charter, the draft budget, justification of the expected financial implications for the state budget for the next three budget years. Budget organizations established by a decision of the Founder may be abolished, their subordination or method of financing may be changed from a budgetary to a contributory organization and vice versa. If the dissolution occurs by division, merger, or amalgamation, the Founder in the decision shall specify the date, substantive, and financial definition of the property, rights, and obligations that pass to the legal successor. Only a budgetary or contributory organization can be the legal successor. If the organization is abolished by dissolution without a legal successor, the rights and obligations pass to the Founder on the day of dissolution, unless a special law provides otherwise (Mažárová, 2010).

Organizations are constantly trying to figure out how to improve and do more with less, especially with today's budgetary pressures. We can also make visible the public value factors. Public value can be described as 'what adds value to the public and what is valued by the public (Majerčáková & Mittelman, 2014). Due to this perspective, the State Budgetary Organizations are confronted with a complex multi-stakeholder environment. There is continuous pressure on corporate leaders and government officials to reduce waste, improve services and margins that provide a better overall value to its shareholders and citizens. Organizational optimization is the new way to look at an organization applicable to any type of organization, assess its current health and optimize its future potential (Hutcherson, 2014).

Kickert (2001) claims the governance of these sorts of organizations is particularly challenging. In addition to administrative issues, substantive policy issues must be addressed as well. Questions arise not only about organization and structure but also about values and culture. On the other hand, Reschenthaler (1998) believes in developing a more benign and more managerially/operationally based model of reasons why governments tend to have difficulties in early on diagnosing problems correctly, selecting policy directions, designing effective and efficient programs, implementing those programs, and avoiding what is commonly called public sector failure. According to Hay and Cordery (2016), over recent years, governance practices in the public sector have developed considerably via independent directors and audit committees.

Public sector organizations have the responsibility to provide public services while having to deal with a dynamic and turbulent environment and budget constraints. The pressure to innovate and improve performance leads these organizations to look for more effective management methods and tools. Management Control Systems are used to improve organizations' performance even in the public

sector (Felício et al., 2020). Public organizations are often confronted with the need to implement organizational changes (Van der Voet, 2014) and implement performance-based budgeting in the public sector (Mauro et al., 2020).

State administration, as the most important part of public administration, is defined as all activities of the state in the field of organization and management of society through state administration bodies. The state administration can be characterized as a separate type of activity of the state, which is regulated by law, contains power goals and certain specifics of the procedure for achieving them (Tej, 2011).

The Ministry of the Interior, in cooperation with other central state administration bodies in accordance with the Government's Program Statement for 2012–2016, implements the aims and objectives of the ESO program—Effective, Reliable, and Open Public Administration. This is the largest planned reform of the state administration since 1989, and its ambition is to streamline the functioning, ensure the quality, transparency, and accessibility of public administration for the citizen. Due to its complexity and difficulty, the reform is divided into several stages, while the individual measures of the reform are gradually implemented by 2020, and one of them is optimization of state administration performance, optimization of processes and structures of central state administration bodies, optimization of processes and self-government performance (Mišún & Mišúnová Hudáková, 2015). The aim of the project “National Project Optimization of Processes in Public Administration” is to create an effectively functioning, client-oriented public administration through process optimization. If these goals are met, the implementation of process optimization in public administration in Slovakia through the ESO program will be a breakthrough in Slovakia, because so far carelessness of governmental bodies has caused more damage, and that negative influence persist through many wrong decisions (Kočíšová & Stoličná, 2017).

An effectively functioning public administration is one of the factors supporting economic growth, job creation and a prerequisite for the development and implementation of policies that build trust, support investment and sustainable development. Despite several reform efforts, public administration in Slovakia does not meet the requirements of the twenty-first century. The project Optimization of Processes in Public Administration is based on a systematic approach, the aim of which is to reduce the administrative burden for citizens and entrepreneurs by using process management through the optimization of processes based on life situations (Ministry of Interior, 2020). Reconsidering the service quality in the public sector as well as private enterprises, the need for public sectors to adopt principles and practices of private sectors is concerned with customer-focused approach (Pyon et al., 2009). On the other hand, there is a fact that the public authorities are becoming reluctant to invest in the projects of innovation (Majerčáková & Mittelman, 2016). From this perspective, public organizations are facing the necessity to create core characteristics for implementation of possible improvement due this fact.

3 Current State of Managing Organizations in the Education Sector

The Ministry is according to “Act on the organization of government activities and the organization of the central state administration” the central state administration body for kindergartens, primary schools, secondary schools, primary art schools, language schools and universities, school facilities, lifelong learning, science and technology, state care for youth and sports. As the name of the ministry suggests, its competence covers three basic areas, namely education, science and research, and sport. Considering the need to ensure the fulfillment of the Ministry’s tasks founded in generally binding legal regulations, the Government’s Program Statement, as well as other binding documents and policies, the Ministry can establish budgetary and contributory organizations as its directly managed organizations. These are independent legal entities of the state, which are involved in the state budget by their revenues and expenditures. The budgetary organization shall operate independently in accordance with the approved budget with the resources determined by the founder within its budget. The contributory organization is involved in the state budget with a contribution, and usually, less than 50% of production costs are covered by revenues.

The current number of budgetary and contributory organizations of the Ministry is 16. Table 1 shows the organizations under the founding competence of the Ministry established by law or by the Ministry.

Budget expenditures on budgetary and contributory organizations of the Ministry for the last 6 years are listed in Table 2. The Table 2 contains data concerning the

Table 1 Budgetary and contributory organizations within the competence of the Ministry

Budgetary organizations	Contributory organizations
The Slovak Research and Development Agency ^a	Slovak Anti-doping Agency ^a
The Research Agency	The Slovak Center of Scientific and Technical Information
The International Laser Centre	The National Sport Center of Slovakia
The Methodology and Pedagogy Centre	The Home of the Slovak Teachers’ Chorus
The National Institute for Certified Educational Measurements ^a	IUVENTA—Slovak Youth Institute
The Slovak Pedagogical Library	The Research Institute for Child Psychology and Pathopsychology
Slovak Historical Institute in Rome ^a	Not belonging
The State School Inspection ^a	Public universities
State Vocational Education Institute	Business companies
The National Institute for Education	Schools and school facilities

Source: Author’s study based on Minedu (2020b)

^aEstablished by law

Table 2 Drawing of the budget by budgetary and contributory organizations

Year	Approved budget (€)	Adjusted budget (€)	Drawing of the budget (€)	Difference between approved and adjusted budget in%
2014	53,837,278	137,085,036	137,294,405	+ 155
2015	39,236,237	140,387,712	140,474,448	+ 258
2016	42,850,840	62,293,866	62,450,290	+ 45
2017	43,486,537	80,759,861	80,903,139	+ 86
2018	55,911,852	73,885,522	73,249,501	+ 32
2019	58,938,879	63,647,438	63,500,399	+ 13

Source: Author’s study based on Minedu (2020c)

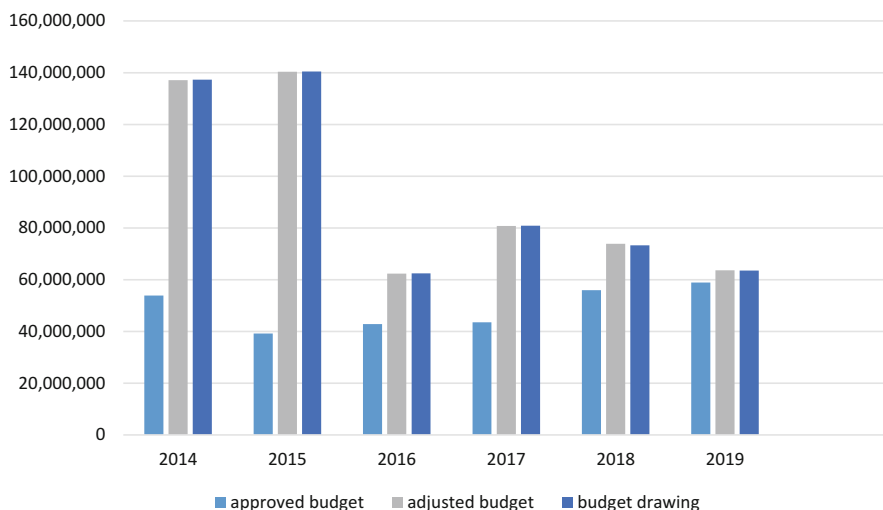


Fig. 1 Budget of directly managed organizations. Source: Author’s study based on Minedu (2020c)

approved budget, adjusted budget and drawing of the budget for the relevant year (Minedu, 2020c).

From the available data, it is clear that the approved budget every year was not sufficient to cover the expenditure of budgetary and contributory organizations and had to be increased during the financial year and almost all allocated resources were used up every year (Fig. 1).

4 Determinants Affecting Management of Organizations in the Founding Competence of the Ministry

There are three main areas of difference in the management of public and private sector organizations (despite blurring differences): a political (not market) identification of the needs, not applicable performance measurement resulting from the existence of a profit-making motive and, the different legal environments in which the management of both sectors operates (Wright & Neměc, 2003).

Legislation as a very important determinant affecting the management of organizations in the government department covers the following legal areas:

1. The basic framework defining the competencies of the Ministry and budgetary and contributory organizations, e.g., legislation on education, education funding, state support for research and sport, organization's activities by law.
2. The general framework for ICT and data, e. g. eGovernment, data protection, free access to information.
3. The framework for strategic and financial management and asset management, e. g. state property management, budget rules in public administration, Civil Service Act, Public Procurement Act).
4. Lower-level legislation as deeds of foundation, statutes, Contracts, main tasks plan, organizational rules, internal regulations of the Ministry including Ministry's organizations management.

The change of the legislation mentioned above in points 1 to 3 is time-consuming and procedurally demanding. For that reason, the Ministry should focus on the modification of lower-level legislation, which must be following "higher" legislation.

5 Management of Directly Managed Organizations of the Ministry

The basic rules of managing ministries and their budgetary and contributory organizations are regulated by a special Act on budgetary rules of public administration. Although the Ministry and the organizations managed by the Ministry work as independent autonomous organizations, the Ministry is not only legally and financially responsible for their obligations, e.g., in case of their abolition or the need for payment following a judgment, but also politically, as they represent part of the Ministry. If a budgetary organization or a contributory organization terminates without a legal successor, the rights and obligations shall pass to the founder on the day immediately following the date of dissolution unless a special law provides otherwise. Various management tools should be used to manage this type of organizations.

5.1 Responsibilities of the Director, Statutes, and Charters

The budgetary and contributory organizations are managed by the statutory authority appointed and removed by the Minister. The statutory authority is responsible for the activities of the organization (Minedu, 2020d). The appointment of a particular candidate comes after a job interview in accordance with a special act that verifies the candidate's skills and knowledge. Statutory authority is considered as a public official according to Constitutional Act.

The founding documents—charters and statutes of these organizations are issued by the Ministry. The charter regulates the basic purpose and activity, property, rights and management. The statute further regulates the mission and activities of the organization, cooperation, management and advisory bodies and the management of the organization, or other rights and obligations and conditions of operation.

In 2018, the Ministry carried out an analysis of the statutes and founding documents of directly managed organizations in order to eliminate possible duplications in competencies and determine the possibilities of abolishing some directly managed organizations in order to optimize their structure. The result of the analysis is that although several tasks and activities are of a similar nature, they are focused on the specific area that the organization performs. Based on the conclusions of the analysis, it is not recommended to dissolve and merge the organizations. It is necessary to focus on improvement their functioning, unification of processes, the correct setting of Contracts and plans of main tasks to be following the Contract. As the first step in optimizing the structures and activities of the organizations, it is proposed to unify and extend the Contracts and the plan of main tasks. The aim of the proposed amendment is to extend the documents to the economic part and to achieve a uniform procedure for all managed organizations. In 2019, a pilot operation of the unified structure of Contracts and plans of main tasks took place (Government Office, 2020).

5.2 Internal Regulations

Internal regulations are another management tool for the Ministry and budgetary and contributory organizations. Internal regulation defines the relations and application of laws and other generally binding legal regulations in the management of processes and the activities in the government department. In accordance with laws and other generally binding legal regulations and the Statute of the Ministry, the Organizational Rules establish the basic relations between the Ministry and the contributory and budgetary organizations of the Ministry (Minedu, 2020d).

Other internal regulations governing the management of directly managed organizations are orders of the Minister and directives regulating the following areas:

1. Approving public procurement with an estimated contract value over € 20,000.
2. Approving the participation in the project, considering the budgeting and project efficiency.
3. Procedure for preparing and changing the budget of the Ministry and its organizations.
4. Procedure for the preparation of Contracts and main tasks plan—introduces a new unified structure of Contracts and amendments thereto on the basis of the pilot operation in 2019 and the obligation to make any change in funding only by concluding an amendment to the Contract; the directive was approved on 21.12.2019.

5.3 *Contracts*

The relationship between the budgetary and contributory organizations and the Ministry for the particular year and organization is regulated by a Contract. A Contract is not a contract in the meaning of a legal act, but it is a published internal planning and organizational document, the aim of which is to clarify the relations between central state administration bodies and organizations in their competence in the field of implementation of activities and their financing in the performance of public functions and public benefit activities. When preparing Contracts, it is necessary to integrate them with other used planning and monitoring mechanisms, especially with the preparation of the plan of the main tasks of the organization. Any changes in the Contract during the year are possible by agreement of both parties or by a unilateral decision of the central authority (Ministry of Finance, 2002).

Regarding the system of concluding Contracts in recent years, in 2014, only one amendment was concluded with only one organization—the State Pedagogical Institute and the funds' volume was reduced by € 10,000 due to the non-implementation of a task (Minedu, 2020e). Based on the drawing of the budget in 2014 (Table 2), it can be clearly stated that the allocation of funds was not reflected in Contracts. This was obviously in conflict with the purpose of Contracts defined in the “Draft Measures for the Improvement of the System of Contracts between Central State Administration Bodies and Subordinate Organizations” issued by the Ministry of Finance in 2002.

In 2015 and in 2016, no amendment to any of the Contracts was concluded. Nevertheless, especially in 2015, there was a several-fold increase and drawing of the approved budget by budgetary and contributory organizations. In 2017, the amendment was concluded again only with the one organization and again the State Pedagogical Institute. The subject of the change was an increase in the budget for € 10,000 due to the need to implement a task based on the transfer of competencies (Minedu, 2020e). Again, however, it can be stated that the increase in the budget of budgetary and contributory organizations in 2017 was not reflected in the concluded Contracts and amendments. In 2018, an amendment was concluded with only one organization Juventa—Slovak Youth Institute, which increased the

Table 3 Change in the budget of budgetary and contributory organizations based on Contracts and amendments

Year	Approved budget (€)	Change of budget identified in Contracts (€)	Adjusted budget (€)	Difference between approved and adjusted budget (%)
2014	53,837,278	-10,000	137,085,036	+155
2015	39,236,237	0	140,387,712	+258
2016	42,850,840	0	62,293,866	+45
2017	43,486,537	10,000	80,759,861	+86
2018	55,911,852	65,900	73,885,522	+32
2019	58,938,879	4,258,457	63,647,438	+13

Source: Author's study based on Minedu (2020e)

organization's budget by € 65,900 due to the need to implement new tasks (Minedu, 2020e). However, the content of the Contracts was still not aligned with the actual drawing of the budget.

In 2019, a pilot operation of the unified structure of Contracts and plans for the main tasks took place, together with quarterly deductions. The aim of the uniform regulation of documents is their extension by the economic part and to achieve a uniform procedure of all budgetary and contributory organizations. The individual tasks were defined in detail and a time fund was allocated to each task. The deduction of performance was carried out on a quarterly basis, and its conclusion should be a structured document that summarizes the activity, clearly defines the status of individual tasks and quantifies the budget drawdown against the plan. In 2019, amendments were concluded for contacts with five organizations: Methodological and Pedagogical Center, Center for Scientific and Technical Information, National Institute of Certified Measurements of Education, State Pedagogical Institute, Research Institute of Child Psychology and Pathopsychology (Minedu, 2020e). The amount for the fulfillment of tasks was increased by € 4,258,457.

Based on the data in Table 2 and Table 3, which reflects the state of budget execution during individual years by budgetary and contributory organizations, it can be stated that changes in the budget of organizations during the years 2014 to 2018 were not reflected in the Contracts. Although the introduction of a unified Contract structure did not reduce budget expenditures, there was a historically lowest increase in the budget of directly managed organizations during the budget year. The budget of directly managed organizations was increased by only 13%, which is negligible compared to previous years. It is therefore clear that the newly introduced form of Contracts, which requires a detailed description of individual tasks with the allocation of time funds and the extension of Contracts with a detailed economic part, contributed to better financial planning. Regular deductions and monitoring of task performance made it possible to set ongoing budget adjustments. Almost all changes in the budgets of directly managed organizations were made through changes in Contracts. Only about 10% of the amount of the budget increase in 2019 was not recorded in the Contracts.

6 Possibilities of Optimization in the Management of Budgetary and Contributory Organizations Within the Competence of the Ministry

Due to the need for efficient management of public resources, which the functioning of directly managed organizations is financed from, it is necessary to constantly map the possibilities of optimization and their application to the management of these organizations.

6.1 Activities Implemented in the Past

In connection with the optimization of budgetary and contributory organization's management, the Ministry worked during the first half of 2018 on the preparation of the Reform Plan—Improving management processes and increasing the quality of support services. The aim was to bring a fundamental change in the system of work organization, more efficient financing and to increase the quality and availability of services for users. Projects Effective management of the Ministry and modern internal services, with estimated costs: € 4.97 million, and Comprehensive system for performance management and support, with estimated costs € 4.90 million, was intended to be financed Reform Plan from Euro funds.

In May 2018, the version of the Reform Intention was finalized and the preparation of public procurement began (Government Office, 2018). The Ministry prepared the Reform Plan, supposed to be financed from Euro funds. Subsequently, the Ministry decided to complete the preparation and provide the planned activities on its own (Government Office, 2019).

6.2 Controls and Outputs of External Entities as an Incentive for a Change

Like any other entity, the Ministry and budgetary and contributory organizations are subject to the control performed by the other bodies, such as Government Audit Office, Supreme Audit Office, Value for Money Department. The conclusions of the performed inspections may be an incentive for changes in the management of budgetary and contributory organizations.

In 2018, an inspection was performed by the Supreme Audit Office. The inspection was focused on the activities of selected organizations. The inspection pointed out a shortcoming—inconsistent procedure in the preparation of Contracts, despite the fact that they are organizations with the same form of management and the same competence. The measures concerned, e.g., especially the budgetary process, the area of evaluation Contracts and plans of main tasks (Supreme Audit Office, 2018).

The results of this inspection appear to have prompted an adjustment of the system for concluding Contracts.

The Implementation Unit of the Government Office monitors the deduction of measures defined in the Revisions of Expenditures. Implementation Unit communicates with Ministry and relevant budgetary and contributory organizations in order to set up cooperation and create monitoring processes or measurable indicators in connection with established measures (Government Office, 2020). In the field of budgetary and contributory organization management, the Implementation Unit monitors two tasks: (i) Update the analysis of centralization of support services and optimization of premises of directly managed organizations of the Ministry and (ii) Optimize the structure and activities of directly managed organizations (Government Office, 2019). The recommendations of the Implementation Unit may also be an incentive for changes in Ministry's organizations management. The current evaluation and recommendations for the Ministry are: to accelerate the streamlining of the functioning of the Ministry including directly managed organizations, use disposable spaces in accordance with the plan for the optimization of the use of free spaces with estimated savings until 2024 to € 2.3 million, to start central procurement of selected commodities. In the field of Contracts, it is recommended to evaluate them on a quarterly basis (Government Office, 2020).

7 Results and Discussion

Based on the available data, it can be stated that there are probably long-term errors in budget planning, as significant deviations have occurred in the approved and drawn budget each year, despite the valid and effective directive on the budgetary process, even though the reform of public finance management is implemented (Košovská et al., 2014). It seems that this problem could be solved by the system of unified Contracts, as the newly drafted Contracts are extended by the economic part, and it is possible to monitor the drawing of budget for individual tasks compared to the plan already during quarterly evaluations.

Considering the content and form of Contracts concluded for 2019, as well as the concluded amendments, it is obvious that the Contracts are clearer, and the financing of organizations is more transparent.

Based on the pilot operation of the unified form of Contracts, there is a directive in force that introduces a new unified structure of Contracts and the obligation to make any change in funding only by concluding an amendment to the Contract.

Based on the fact that the approved budget for the individual directly managed organization was not the lowest for the monitored period, it can be stated that the individual tasks that the particular organization had to perform according to the Contract, were sufficiently justified and planned. This is also confirmed by the fact that in 2019, the largest number of amendments were concluded—with five organizations with total value of € 4,258,457. At the same time, this change reflects 90% of the value of the increase in the budgetary and contributory organizations budget in

2019, as well as it is the lowest increase of budgets in the last 5 years. In the light of aforesaid, it can be stated that the established hypothesis is confirmed and that the introduction of a new unified, extended form of Contracts resulted in improved financial planning and eliminated multiple budget increases without due justification. It seems implementation of this tool is a part of managerial reform that may lead closer to performance-based budgeting, which necessity Mauro et al. (2020) emphasize.

The responsibility of directly managed organizations for liabilities can also be identified as a problematic area, as the Ministry has the right to create and abolish budgetary and contributory organizations, but in case of their abolition without a legal successor, the Ministry is responsible for organization's obligations.

According to Hughes (2017) public managers are personally responsible for the delivery of results, which is implemented as the responsibility of the statutory authority of the organization.

As positive steps in governance, we can evaluate Ministry's initiatives in the field of optimization of directly managed organizations —analysis of statutes and charters in order to identify possible space for decreasing the number of the organization or adjust the statutes and charters to eliminate duplications, which proved, that implementation of organizational changes is not needed unlike Van der Voet (2014) concludes.

Based on internal regulations, the Ministry should have data on procured commodities and could initiate joint public procurement. The positive effect of joint public procurement would be not only economies of scale but also reducing administrative burdens to ensure public procurement. The introduction of joint public procurement of selected commonly available goods and services in the government department would be a breakthrough solution for the supply of support services. In addition to a significant increase in transparency, significant financial savings, joint procurement should introduce holding management features into the government department and significantly improve access to operating cost data.

Based on the data available from the Implementation Report, the areas for improving management efficiency are also asset management (especially building management, efficient use of vacant office space), as well as IT support and consolidation of information systems.

Based on the available information, it can be stated that in the area of main activities, there are gradual positive changes in the management of organizations through the system of Contracts. The area of support activities seems to be an area with great potential for optimization. In the area of support processes according to the identified areas, it is also possible to start with the gradual introduction of changes independently of each other (joint public procurement of some selected commodities, consolidation of selected information systems, use of vacant office space directly by managed organizations). These steps are aimed at introducing elements of centralization into management, which differs, for example, from trends in the Netherlands, where devolution is one of the main reform trends in the Dutch public sector (Kickert, 2001).

Furthermore, it is not clear whether Management Control System is in place in the sector; the need and benefits of its implementation are declared by Felício et al. (2020). The introduction of the Management Control System would, on the one hand, significantly change the way of management of organizations in the sector, but on the other hand, its implementation would be demanding, especially in terms of time, content, and finances.

The implementation of individual optimization options in the management of directly managed organizations is currently taking place with regard to budgetary possibilities. The implementation of other optimization measures will probably be the subject of a decision of the management of the Ministry in the next election period 2020–2024.

8 Conclusion

Evaluating the results of research, the goals are achieved. The current state and determinants influencing the management of directly managed organizations of the Ministry are analyzed. At the same time, the possibilities of optimization in the management of directly managed organizations within the competence of the Ministry are pointed out.

Based on the essential facts and considerations contained in this article, it can be concluded that budget planning is problematic, as significant deviations have occurred each year in the approved and drawn budget, despite a valid and effective directive on the budgetary process. However, it seems that the implementation of a new system of the unified form of Contracts and their regular deductions can significantly eliminate this problem. Another problematic area of management is the responsibility of directly managed organizations for liabilities, because in case of their abolition without a legal successor, the Ministry is responsible for their obligations. Based on available information, it can be stated that in the area of main tasks, there are gradual positive changes in the management of organizations through the system of Contracts. The area of support activities seems to be an area with great potential for optimization. In the area of support processes according to the identified areas, it is also possible to start with the gradual introduction of changes independently of each other—joint public procurement of some selected commodities, consolidation of selected information systems, use of vacant office space directly by managed organizations. The Ministry is gradually introducing changes in the management of directly managed organizations.

The article contains current data on mutual relations between the Ministry and its budgetary and contributory organizations and identifies the factors influencing these relations. From the scientific methods, an analytical and descriptive method is used to approximate and to analyze the current and legal state. Analysis, synthesis, abstraction, and comparative methods are used to examine the factors and elements influencing the management and optimization possibilities of management of budgetary and contributory organizations. By applying these methods, it was possible to

bring conclusions about current problems and possibilities of optimization in the management of budgetary and contributory organizations of the Ministry.

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The Factors that Promote Business Growth Opportunities for SMEs in Latvia in Wholesale and Retail Trade Sector



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Abstract This study seeks to explore the factors that promote and limit business growth opportunities for SMEs operating in Latvia in the field of wholesale and retail trade. The objective of the research is to emphasize the significance of finances and innovation and to investigate the correlation between the finances and firm's growth. To achieve the aim of the study quantitative research is applied. This study is exploratory and interpretative in nature, with data collected via multiple sources of evidence, incorporating online survey, business reports and previous researches. The respondents of the survey were identified randomly from SMEs database and were selected depending on size and scope of activities. The results of the research reveal that the growth of SMEs is influenced by factors such as finances, human resources and innovation. The most obvious finding to emerge from this study is that access to finances remains a major obstacle for SMEs and limits their growth opportunities. Despite the importance of the subject, there exists a paucity of researches scrutinizing this issue. Consequently, it is hoped that this research will contribute to a deeper understanding of the subject and will equip policy makers, managers and researchers with useful evidence and insights.

Keywords Trade · Latvia · SMEs · Finances · Growth

1 Introduction

Firm's growth has been amply discussed in the researches and a considerable amount of literature has been published on it. Nevertheless, most studies scrutinize a definite subset and retain narrow viewpoint. To date, there are few studies that have

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investigated the internal and external factors that promote and hinder SMEs growth, notably in Latvia. This study aims to contribute to this growing area of research by exploring the factors that have influence upon firm's expansion. This paper addresses the link between finances and SMEs growth and studies SME growth as a multidimensional approach. Among other problems, that constrain the operations of SMEs, the dominant factors are lack of access to finance and inadequate equipment, technology to satisfy the increased market need (Nwankwo & Gbadamosi, 2020). The barriers to growth for SMEs include science base mechanisms for technology transfer and entrepreneurial climate (Davidsson et al., 2010). The objective of the study is to contribute to knowledge on firm's growth and to scrutinize deeply the correlation between the financial means and growth opportunities. We stipulate firsthand evidence on how finance, innovation and human resources are identified as major contributors to firm's expansion.

This prospective study was designed to investigate internal and external factors that not only contribute to the growth, but that hinder further expansion. There are several areas where this study makes an original contribution to the literature by providing practical evidence from representatives of SMEs operating in the field of wholesale and retail trade in Latvia. We display robust evidence that lack of finance to pursue R&D and lack of innovation is impediment to growth, whereas innovation is a crucial internal factor promoting firm's expansion. Taken together, these results suggest that SMEs are characterized by positive growth when innovation is practiced and financial means are ensured. This study has found that generally small businesses face financial difficulties in business and thus struggle to grow. The findings of this investigation complement those of earlier theories arguing that SMEs might have struggles in the process of growth; nevertheless, firm growth is a condition for a competitive advantage. The importance and originality of this study is that it explores internal and external growth factors in SMEs in Latvia a topic that is insufficiently researched and paucity of evidence remains in that direction.

The study has been organized in the following way. The first section of this paper gives a brief overview of the research and introduces the topic. The second section begins by laying out the theoretical dimensions of the research, and looks at available literature. In this section, we discuss the stream of research related to firm's growth and address the importance of SMEs in economy. Throughout this paper, the abbreviation SMEs will refer to small and medium-sized enterprises. Sections 3 and 4 are concerned with research problem formulation and the methodology used for this study. The fifth section analyses the results of the survey undertaken during the study and presents the findings of the research. Finally, the conclusion outlines likely pathways for further research and concludes the paper.

2 Theoretical Background

Conventional research into the growth of businesses has suggested that internal growth tends to be an applicable option when there exist robust interactions with the firm's activities and the target industry. In addition, internal growth is a viable option in the circumstances where firms can advance and incorporate new competences without time constraints. Consequently, in-house competences that will ensure competitive advantage will be developed (Coad, 2007). Other researches omit the mergers and acquisitions when addressing internal growth. From this perspective, the internal growth is dependent not only on internal resources with which a firm is familiar to working, but also on the experience of management (Penrose, 1995). Growth is comprehended as an inevitable process to which the firm has to follow. Thus, the expansion tends to be a process of developing and growing that is unavoidable course in the given context (Tunberg & Anderson, 2020).

In this rapidly changing world, it is evident that less developed countries are rising as alternatives to developed markets due to saturation in the well-established segments. Therefore, the role of SMEs is critical and is dominant in developing countries. In fact, SMEs provide technologies and services to niche energy markets that are weakly operated by the central efficacy method (UN, 2005). As a matter of fact, the private sector is in the up-and-coming phase in emerging economies (Harvie et al., 2017). In addition, SMEs could become an essential medium for generating income and can greatly contribute to the gross domestic product, economic growth and reduce high rate of unemployment (Fischer & Reuber, 2000). As studies reveal, the contribution of SMEs in employment and GDP is high in countries with a high GDP rate. Likewise, the total contribution of small firms across the income group is the same. As income upsurges, the share of the informal sector declines, and that of the formal SME sector rises (Ayyagari et al., 2003).

Typically, SME is an independent enterprise and small in size compared to other companies operating in the market (O'Dwyer, 2009). Mostly, small and medium scale enterprises tend to be a heterogeneous group and encompass companies that are innovative and oriented to growth. Meanwhile, other small companies choose to remain small (Hallberg, 2000). If we compare small firms to large firms, we will notice that small firms generate and abolish jobs at a higher rate (Hart et al., 2010). However, business drivers tend to be similar for small and large companies and the growth is based on the strategy and direction the firm follows. As new companies are more flexible than well-established firms, they grow faster (Levy and Powell, 2005). In addition, it is highly emphasized, that SMEs operating in well-developed institutions are more successful (Ayyagari et al., 2003). It is often regarded that SMEs tend to be more innovative compared to large organizations (Hallberg, 2000). The size of SMEs enables them to be flexible to industrial requirements and to adapt robustly to evolving customer needs, trade arrangements and other macroeconomic conditions (Fischer & Reuber, 2000). Pursuant to the statistical definition, small enterprise employs from 5 to 10 workers and medium-sized enterprise hires 50 to 100 employees, with the upper limit between 100 and 250 workers (Hallberg, 2000).

Many researches highlight the importance of innovation, arguing that good firms bring innovation to the market and innovative companies create employment opportunities and contribute to overall economy (Ahlstrom, 2017). In addition, according to some researches, among other factors that affect economic growth, the entrepreneurship appears to be pivotal (Ahlstrom et al., 2019). According to previous researches, technology and creativity are the major sources for SMEs to grow (Nokuzola & Brian, 2020). In addition to technology and innovation, the importance of human resources in the contribution of growth is addressed via many studies (El Shoubaki et al., 2020). Likewise, numerous study results reveal that some SMEs prefer to preserve their business as a family business (Nwankwo & Gbadamosi, 2020). During the different stages of growth, SMEs have diverse management and organizational requirements. SMEs start as unstructured firms and move to more formal structures later (Levy & Powell, 2005). Small companies usually follow effective growth trajectories by expanding initial product within customer base or locations (Cohan, 2017). It is believed that an entrepreneur's behaviour has an impact on a firm's growth. As the growth is multidimensional, the managers who share the running of the business with teammates are more inclined to succeed and grow (OECD, 2010).

For a small and medium scale enterprise to grow and to achieve the full potential, access to finance is imperative. Therefore, it is no surprise that SMEs have difficulty in gaining finances from banks and other financial agencies than larger firms, especially in emerging and developing economies. Access to finances is essential for any company to create more jobs, to become efficient and profitable in the long run. Developing countries have discovered that the influence of SMEs growth programmes on firm functioning has been less than agreeable (Hallberg, 2000). The European Investment Bank finances SMEs investments via global loans, as refining availability to finance is an essential facet to assist entrepreneurship and SMEs across Europe. However, in some countries, it is problematic, as they suffer from a relatively low level of equity investments and bank lending (OECD, 2007). In the initial innovation stage of SMEs, it is less likely that conventional bank financings will provide finances, especially in developing economies. Therefore, in these settings, the role of financial intermediaries is pivotal, that can ensure the appropriate capital and management support for SMEs growth and development (UN, 2005).

Latvia is implementing various programmes to promote the creation of new enterprises (OECD, 2000). In the rankings reported by the World Bank, Ease of doing business 2020, Latvia stands at position #19 among 190 countries (World Bank Group, 2020). The Investment and Development Agency of Latvia (LIAA) is highly involved in supporting and promoting business development (Ministry of Economics Republic of Latvia, 2020). Among other factors, slower SMEs growth is due to the change in consumers' behaviour, specifically their attitude to save more and spend money on large traders. In 2019, the essential sectors in terms of SMEs value-added and SMEs employment remain manufacturing, wholesale and retail trade (SBA, 2019). In February 2020, Retail trade turnover grew by 5.0%, the increase especially was remarkable in the retail sale of cultural and recreation goods accounting for 28.7% and of the retail sale of electrical household appliances

accounting for 25.9% (Central Statistical Bureau of Latvia, 2020). The Baltic International Academy and the University of Latvia examined the factors that influence the development of business milieu and entrepreneurship in regions of Latvia and suggested that for promoting the development of SMEs the policy has to be developed in 3 directions: to promote the development of micro-enterprises, to endorse business start-ups and to increase accessibility to finances (Ratanova et al., 2014).

3 Statement of the Research Problem and Its Formulation

This study scrutinizes the factors that limit and promote business growth opportunities for small and medium scale enterprises operating in Latvia in retail and wholesale trade. The article examines the correlation between financial assistance and SMEs growth. It is argued that access to funds increases firm's opportunities to expand and grow. The causes that hamper firm's growth are identified by the representatives of SMEs, and their views are collected via an online survey. The majority of researches focus on larger firms and thus omit the SMEs specifications and features. Consequently, this research contributes to the overall field and presents the original findings. The study evolves around the following research area: identifying internal and external factors that limit business growth opportunities. It is claimed that access to finance appears to be the greatest concern for SMEs related to growth potential. Following research questions are identified: (i) What is the most crucial external factor that could promote SMEs growth? (ii) What is the most crucial internal factor that could promote SMEs growth? (iii) What is the most crucial factor that could limit SMEs growth?

The purpose of the study is to appraise the linkage between financial support and performance in terms of business growth. In addition, to pinpoint aspects that promote and limit business growth within the specified context. The anticipated outcome is to classify internal and external issues that stimulate and hinder business growth and to acknowledge that access to financial support is a major contributor to the firm's expansion. The research objectives of this research are as follows:

- To scrutinize literature related to SMEs and firm's growth
- To pinpoint factors that hinder business growth
- To identify internal and external growth factors for SMEs
- To find out if financial support has effect on business growth in selected SMEs

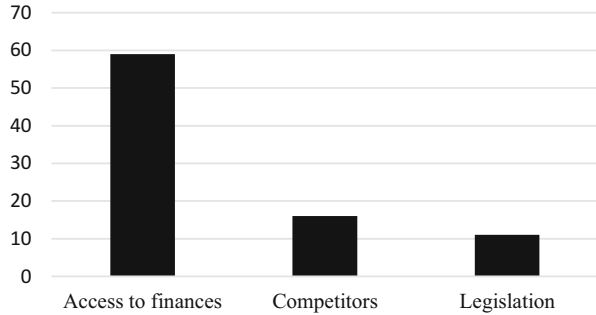
4 Research Methods

The nature of the research methodology implemented for this the study is quantitative. Primary and secondary data are used to develop an analysis of the study. The data sources in this study were divided into the following categories: data on firm growth, data on SMEs and data on the constraints to growth for SMEs. In this study, both primary and secondary data are used and it is obtained through textbooks, government and organization reports and publications. Online questionnaire was used as another method of gathering information for research purposes and captured the views of SMEs representatives. The population size was 110, with the margin of error 5%, uncertainty margin of 95%, confidence level of 95% and with the recommended sample size of 86. The survey was filled out by 88 respondents. Online questionnaire was conducted during the period of January–February 2020. Participation in this study was voluntary and no compensation was given for participation. Online questionnaire was disseminated via e-mail and social media channels to potential respondents. The criteria for the respondents who completed the questionnaire were: SMEs based on the type of business and the organization size. The participants were identified via company registers and only enterprises that fall into the category of small and medium firms were eligible to participate. The online survey was designed in two languages: English and Latvian. The questionnaire in this study included 12 questions, and had three major sections, one section had general questions about organization, the other section addressed specific questions regarding the internal and external growth factors, innovation and financial issues and the final section covered obstacles along the growth process. The structure of the questionnaire was the following: it commenced with general questions and continued with difficult and more specific questions and ended with general questions related to company size and industry. The questionnaire included closed-ended questions and provided a set of answer choices for participants to select from. In addition, rating scale, Likert scale questions and multiple-choice questions were used.

5 Results Interpretation

The survey highlighted several attention-grabbing aspects. When elaborating on the first research question and when addressing external factors that promote business growth, access to finances, action of competitors and legislative environment tend to be pivotal. As results of our survey reveal, 59 respondents, that make up to 67% of participants, consider access to finances to be a crucial factor that promotes SME's growth. Whereas, 16 respondents deem competitors to be the vital factor for business expansion. While legislation and legislative environment are believed to be important external factors that could promote growth by 11 respondents. The results are illustrated in Fig. 1:

Fig. 1 External factors that promote SMEs growth.
Source: Compiled by the authors



The results of present study are in line with previous studies conducted in the country. For example, according to European commission for 8% of Latvian SMEs access to finance is the most serious concern (EC, 2020). This finding broadly supports the study that found out that 61% of 5910 respondents believe that a key barrier to implementing one’s own business idea is the lack of finance according to study results of “Performance Trends in Youth Entrepreneurs Capacity Prerequisite for The Entrepreneurship Development of Latvia” (Bikse et al., 2016). The research “SMEs’ Alternative Financing: The Case of Latvia” has revealed the recent trends in alternative financing in the EU and have identified the alternative sources of funds: venture capital funds, informal investors and crowdfunding and thus proposing to create a single social network of alternative financial service providers in the Baltic States to link them together for better availability to financial services (Rupeika-Apoga & Saksonova, 2018). The research “Enhancing The efficiency of SMEs in Latvia” conducted among 167 SMEs managers in private sector companies show that the competitiveness of the SMEs sector is highly linked to business-friendly environment and how well-organized and stable corporate law is (Linina & Zvirgzdina, 2018).

With respect to the second research question, among the internal factors that promote business growth, following factors have been highlighted: innovation, human resources, finances, organization structure and culture. Another important finding of the study is that innovation is regarded as the most important internal factor that promotes SMEs growth. It is interesting to note that the majority of respondents deem innovation as the most significant internal growth factor promoting business expansion with 39 responses, whereas human and technological resources come second with 20 responses. Access to funds, organization structure and culture is also considered to be vital for business growth as illustrated in Fig. 2:

Prior studies have noted the importance of innovation and availability of financial resources. This finding broadly supports the work of other studies like the survey conducted amongst entrepreneurs from mechanical engineering and metalworking sub-sector of the Latvian manufacturing industry, that reveal that the external environment factors that influence performance in the decline phase are qualified labour force and availability of financial resources (Lace & Ciemleja, 2012). The research that surveyed 600 SMEs in Latvia found out that innovations ensure

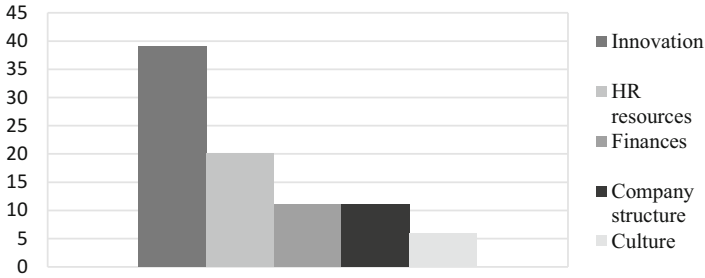


Fig. 2 Internal factors that promote SMEs growth. Source: Compiled by the authors

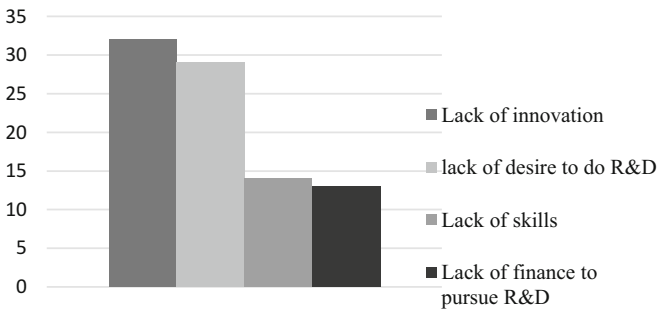


Fig. 3 Issues that limit business growth opportunities. Source: Compiled by the authors

competitive advantage and that ethical behaviour guarantees sound organizational innovation performance (Apsalone & Flores, 2018).

This study sets out with the aim of assessing the issues that limit business growth opportunities. Consistent with the literature, this research found that 32 participants consider lack of innovation as a main impediment to growth. Whereas, 29 respondents deem that lack of desire to conduct research and development activities within the companies tends to be the reason why SMEs do not grow. In addition, lack of skills and finances also limit business expansion opportunities, 14 and 13 respondents correspondingly as illustrated in Fig. 3:

In accordance with the present results, previous studies have demonstrated that among the reasons for business discontinuation in Europe identified by the study by global entrepreneur monitor, tend to be rigid labour regulations, poor availability of skilled educated labour and limited access to entrepreneurial finance. In case of Latvia, the rate of Latvian entrepreneurs in 2017 who abandoned their business stands at 4.2%, that tends to be higher than their peers in Europe where the rate is 2.9%. The main reasons for discontinuation tend to be personal reasons (20.3%) and bureaucracy (24.6%) (Krūmiņa & Paalzow, 2018). These results are in agreement with the study done by the European Foundation for the Improvement of Living and Working Conditions has highlighted that main constraints facing SMEs are access to qualified employees, access to funding and high competition (Eurofund, 2013).

Comparison of the findings with those of other studies confirms that SMEs growth is highly dependent on the use of digital networks (Rivza et al., 2019). These results corroborate the findings of a great deal of the previous study which confirms that technological innovation will increase productivity and people's wellbeing (Surya et al., 2021). In addition, there is a need to overcome problems in e-commerce in Latvia and to improve the collaboration between suppliers and buyers of goods and services within e-commerce (Rivza et al., 2020).

6 Conclusion

SMEs play a pivotal role in the development, sustainability and longevity of a country. SMEs have become leading accelerators in economies and play an essential part in the national economies. In these rapidly changing markets and world, the lack of financial resources makes it extremely difficult for small firms to ensure the necessary funds for carrying out research and development activities, to become innovative and to grow. The business environment in which companies operate today is extremely challenging and competitive. In advanced economies and in emerging markets, SMEs contribute greatly to the country's gross domestic product and play an essential role in the economy. Hence, it is predominantly imperative for them to grow and survive within the fierce competition.

The aim of the present research was to examine the factors that promote and limit business growth opportunities for SMEs operating in the field of retail and wholesale trade in Latvia. The study consisted of the development of theoretical grounds and descriptive analysis. In addition, survey results obtained from the representatives of SMEs were studied and illustrated. This research offers an ample glimpse of SMEs operating in the field of wholesale and retail trade in Latvia. It highlights the importance of growth and impediments across the growth process.

As the research findings reveal, the role of small and medium-sized enterprises is remarkable in Latvia. The number of enterprises is increasing year by year, which could be due to financial support and assistance programmes issued by the EU and the local government. However, the capability of SMEs to develop and grow relies on various aspects. The survey results, reinforced by a theoretical review, reveal that among other factors accessibility to finances is a critical factor that promotes SMEs growth opportunities in wholesale and retail sector. Meanwhile, there are some factors that hinder the development of SMEs in Latvia and cause discontinuation from the business. These impediments are access to finance, legal environment and scarcity of entrepreneurial skills. For expanding operations, human resources, managerial and entrepreneurial skills are also pivotal. In this regard, some SMEs lack professional skills training or knowledge acquisition. This study has shown that access to finance still remains a rigid problem for some SMEs operating in Latvia. In the majority of cases, the banks perceive SMEs as risks than investments, and that is why loan acquisition is a daunting process. Government and policymakers can play a crucial role in creating conditions and in providing financial assistance and

contributing to the development of SMEs. Yet, state agencies need to realize that SMEs have dissimilar needs and it cannot be generalized.

The research also covered previous researches conducted in the field, and their outcomes collide with the conclusions of the present study. In light of the findings of the study, four major outcomes emerge from present research:

- First, access to finances and legislation environment where firms operate appear to be the essential and critical factors for small and medium enterprises, especially when it comes to expansion and growth.
- Second, biggest challenges faced by SMEs within the process of growth are: the availability of skilled staff, the lack of access to finance and lack of innovation for creating value-added products and services.
- Third, bank-related products remain the significant financing source for SMEs. Notably, bank loans and credit lines are applicable financial instruments for their business.
- Fourth, the discontinuation and exit from the business is often caused by the lack of finances, rigid labour regulations and poor availability of skilled educated labour.

Research aims have been reached as scientific literature related to factors that limit business growth opportunities also highlights the importance of access to finances, skilled labour and innovation. The result of the research visibly displays that various internal and external issues influence SMEs development and growth. Besides examining the literature, the present paper identified that lack of innovation, lack of finances and desire to do R&D within an organization can limit business growth opportunities. It should be noted that research outcomes not only contribute to theoretical knowledge, but will also provide new insights into firm's growth to entrepreneurs, start-up managers and to the wider public.

Among limitations of this research, it is worth mentioning that there is a scarcity of ready-made databases for SMEs and it was arduous to identify the active and non-active SMEs. In addition, the respondent's database was prepared from online business directories. Therefore, it lessens its viability and carries some aspect of distrustfulness. Due to practical constraints, this paper cannot provide a comprehensive review of larger sample size. Moreover, avoiding non-biased responses in the questionnaire was challenging. Nevertheless, web pages and websites usually have marked bias and information is obsolete or not updated. For the purpose of reliability, secondary information attained through publications, articles, and online sources were cross-checked.

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Part III
Eurasian Business Perspectives: Marketing

Celebrity Brand Extensions: Go or No Go?



Oylum Korkut Altuna  and F. Müge Arslan 

Abstract Celebrities have been examined excessively as endorsers of brands for the last few decades due to their effectiveness in brand communications and a major contribution to the image of the brands. However, there is a research gap regarding studies on celebrities being brands themselves. Moreover, while there are numerous academic studies on brand extensions pertaining to inanimate brands, almost none are on celebrity brand extensions although celebrity brand extensions are quite common in practice. This study tries to fill this gap by examining the feedback effects of celebrity brand extensions on attitudes toward the celebrity. Thus, the aim of the study is to examine the effects of different authenticity levels of celebrities and the different levels of congruency between the celebrity and the extension on attitudes toward the celebrities and purchase intention of the brand extensions. A between-subjects factorial experimental design was used: 3 (authenticity: High/Moderate/Low) x 2 (congruency: High/Low). Data were collected through a survey ($n = 438$) using convenience sampling. Results show that there is a significant deterioration in post-extension attitudes towards the celebrity. Additionally, it was determined that as the authenticity level of the celebrity increases and the congruency between the extension and the celebrity increases, the post-extension attitudes toward the celebrity, the extension, and purchase intention also increase.

Keywords Celebrity brand extension · Authenticity · Congruency · Attitudes toward the celebrity · Attitudes toward the extension · Purchase intention

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1 Introduction

Celebrities have been influencing popular culture and consumption patterns all over the world for many years. A watch, a dress, makeup, etc. used by a celebrity may become popular overnight. Due to their unique associations and the need to be managed professionally, Thomson (2006) states that celebrities may be considered as brands themselves. According to *Euromonitor* (2019) it is estimated that in the United States, 25% of all advertisements use celebrities. Additionally, celebrities “offer unique brand extension opportunities” (Kowalczyk & Royne, 2013: 211). Thus, it is important that celebrity brands should be the focus of academic studies.

Creating a brand is a costly process that requires an immense amount of money, time, and effort. Therefore, once such an investment is made and the brand is established in the market, it is common for firms to try and exploit this asset by extending the brand into other categories (Hem et al., 2003). According to a worldwide study by *Nielsen* (2015), about six people in 10 prefer to buy new products introduced by brands they are familiar to. Furthermore, as brand extensions reduce the risk of failure (Aaker, 1990; Hem et al., 2003; Thamaraiselvan & Raja, 2008) it is of no surprise that up to 95% of all new products entering the market are some type of extensions of established brands (Lye et al., 2001). As a result, for the past few decades, firms have been using brand extensions as a successful marketing strategy to obtain high profits from their established brands (Thorbjornsen, 2005).

While there are numerous academic studies on extensions pertaining to inanimate brands, a very limited number is on celebrity brand extensions. Additionally, existing literature focuses on celebrities majorly as endorsers but not as brands themselves, let alone examine celebrity brand extensions, in spite of the fact that there are many examples of celebrity brand extensions in practice (e.g., Rihanna’s beauty product line under her last name Fenty, Kim Kardashian’s fragrances, and Serena Williams’ clothing line). Indeed, celebrities are an important part of the market economy (Parmentier, 2010; Kowalczyk & Royne, 2013) who also act as businesses themselves selling all kinds of products and services (Preece, 2015). Attaining power and interest through the movies, TV shows, sports, music, and social media presence, they gain influence in popular culture and society (Schimmelpennig & Hunt, 2020). These human brands interact with their external stakeholders such as critics and general public and the internal stakeholders such as professional agents to create their own brand identities and those products that the human brands create are strongly effective on their brand identities (Pluntz & Pras, 2020). However, there is a gap in literature on consumers’ intentions to purchase products that are celebrity brand extensions or what consumers’ attitudes are toward the celebrities’ brands that are extended to new product categories (Kennedy et al., 2021).

This study tries to fill the gap in celebrity brand literature by examining the feedback effects of celebrity brand extensions on attitudes toward the celebrity. Additionally, the effects of different levels of perceived authenticity of the celebrity and varying congruency levels of the extension with the celebrity on post-extension

attitudes toward the celebrity, attitudes towards the extension, and purchase intention are examined.

The paper begins with framing the theoretical background for the key concepts of celebrity brand and brand extension in literature. Following the theoretical background, the relations between the variables are discussed in the hypotheses development section and the conceptual research model is presented. Subsequently, the selection of stimuli (*celebrities and hypothetical extensions*), questionnaire design, measures used in the study, and the sampling procedure are explained in the Methodology section. The paper ends with the results of the data analyses, discussion of the findings, managerial implications, conclusion, limitations, and future research recommendations.

2 Theoretical Background

As companies utilize other brands, persons, places, or events to link their brands to primary and secondary sources of brand equity (Keller, 1993; Uggla, 2006), celebrities have been known to be effective in advertising goods and services as endorsers (van Norel et al., 2014). Although companies have been benefiting from celebrities in promoting their products/services since the 1890s when actress Sarah Bernhardt appeared on posters for the French rice powder brand La Diaphane (Fleck et al., 2012: 651), treating celebrities as brands themselves is quite new. Thomson's (2006: 105) study is one of the first in suggesting that humans, and thus celebrities, may also be considered as brands. Subsequently, celebrities have started managing their names as brands and utilizing brand extension strategies to capitalize on their established brand names (e.g., David Beckham's bodywear line and Jamie Oliver's cook books) (Moulard et al., 2015).

There is a difference between a celebrity endorser and a celebrity brand extension. When the celebrity is an endorser, he/she gets paid for allowing the use of his/her image and associations in conjunction with a product whereas when the celebrity extends his/her (brand) name, he/she has "more control of his/her relationship with the product" and "incorporates" his/her name with the product directly (Kowalczyk & Royne, 2013: 212).

Celebrities have been considered mainly as endorsers of brands but not as brands themselves. Review of past literature shows that celebrity endorsement relies mainly on four different theories: associative-network memory theory (Krishnan, 1996; Till, 1998; Brandt et al., 2011; Spry et al., 2011; Dwivedi et al., 2015); source credibility model theory (Hovland & Weiss, 1951; Sternthal et al., 1978; Ohanian, 1990; Till & Busler, 1998; Goldsmith et al., 2000; Erdogan et al., 2001; Lafferty et al., 2002; Fleck et al., 2012); meaning transfer theory (McCracken, 1989; de Mooij, 2005; Fleck et al., 2012); and congruency/match-up theory (Kahle & Homer, 1985; Kamins 1990; Misra & Beatty, 1990; Erdogan, 1999; Till & Busler, 2000). However, when contemplating celebrities as human brands and celebrity brand extensions, in literature two theories are taken as basis, which are briefly explained below.

2.1 *Meaning Transfer Theory*

Meaning Transfer Model which was developed by McCracken in 1989 posits that celebrities develop a persona depending on their personalities and lifestyles and are assigned meanings by the culturally constituted society (Amos et al., 2008: 210). In the celebrity endorsement process initially a “meaning” or “association” transfer (de Mooij, 2005) from the celebrity to the product, and then from the product to the target audience occurs. The effectiveness of the celebrity depends on the associations he/she brings into the endorsement process. Correspondingly, one of the basic assumptions in brand extension studies is that meanings and associations are transferred from the parent brand to the extension (Aaker & Keller, 1990; Martin et al., 2005).

Prior research on brand extensions examine how this transfer affects attitudes toward the brand and/or extensions and demonstrate its effects on brand image, brand equity, and attitudes (Aaker & Keller, 1990; Boush & Loken, 1991; Martínez & Pina, 2003; Martínez and de Chernatony, 2004; Arslan & Altuna, 2010).

2.2 *Congruency: Match-Up Hypothesis Theory*

The Congruency/Match-Up Hypothesis claims that when there is high congruency between the celebrity and the endorsed product, the advertising message will be more effective (Kahle & Homer, 1985; Kamins, 1990; Misra & Beatty, 1990; Erdogan, 1999; Till & Busler, 2000). Earlier studies examined congruency between the celebrity endorser and the endorsed brand mostly in the context of physical attractiveness (Till & Busler, 2000). Subsequent research (e.g., Misra & Beatty, 1990; Kamins & Gupta, 1994), however, stressed the importance of using an overall level of congruency due to the fact that consumers assessed the congruency between a celebrity and a product based not only on a few factors but on intertwined multiple factors.

In the same vein, the congruency/match-up hypothesis also forms a basis for brand extension literature where congruency refers to the degree of match and/or consistency between the parent brand and the brand extension (Aaker & Keller, 1990).

2.3 *Brand Extensions*

The existing image of the parent brand is a critical issue in the acceptance of the extension because it encompasses all perceptions/associations a consumer holds about a brand in his/her memory (Keller, 1993). Additionally, empirical studies demonstrate that one of the most essential issues contributing to the success of the

extension is the amount of congruency between the extension and the parent brand (Aaker & Keller, 1990; Park et al., 1991; Thamaraiselvan & Raja, 2008). Brand extensions, even if there is a high congruency between the parent brand and the extension, may negatively influence perceptions of the parent brand (Aaker, 2004; Martínez & Pina, 2003; Martínez & de Chernatony, 2004; Arslan & Altuna, 2010).

As mentioned before, although celebrities play key roles in media and the entertainment business and commonly extend their name into new categories (Moulard et al., 2015), barely few academic studies are on celebrity brand extensions. Hence, this study aims to contribute to existing literature by focusing on the neglected issue of celebrities as brands themselves and celebrity brand extensions.

2.4 Development of Hypotheses

2.4.1 Attitude Toward the Celebrity

Past research indicate that extensions have diluting effects on the parent brand (e.g., Loken & Roedder-John, 1993; Aaker, 2004; Martínez & Pina, 2003; Martínez & de Chernatony, 2004; Arslan & Altuna, 2010) no matter whether the extension has high congruency with the parent brand or not (Ries & Trout, 1986). Extrapolating this finding to celebrity brands, it can be argued that celebrity brand extensions will have a negative effect on post-extension attitudes toward the celebrity as well.

H1: Celebrity brand extensions will have a deteriorating effect on attitudes toward the celebrity.

2.4.2 Authenticity

Turner (2013) states that for a celebrity brand to be successful he/she needs to be authentic. For this reason, authenticity has been selected as one of the independent variables of this study. It should be noted that in this study the concept is undertaken not as the authenticity of the self (“*felt perception*”), but how others perceive the authenticity of another (“*perceived authenticity*”) as described by Guillen et al. (2016: 3).

Napoli et al. (2014: 1094) define brand authenticity as “a subjective evaluation of genuineness ascribed to a brand by consumers” and present it as a significant predictor of purchase intention. Similarly, celebrity authenticity is defined as the perception that a celebrity behaves according to “his/her true self” (Ilicic & Webster, 2016) and is a significant predictor of purchase intention. Equally, Raphael and Lam (2019) state that authenticity is very important in consumer behavior as it affects consumers’ perceptions of a brand (human/product) and impacts purchase decisions. Kowalczyk and Pounders (2016) present empirical evidence on the positive relationship of authenticity with emotional attachment, positive word of mouth, and

purchase likelihood. Likewise, in their study on relational authenticity, Ilicic and Webster (2014) found that authenticity is a significant predictor of positive brand attitudes and purchase intentions. Therefore, it is expected that the higher the perceived celebrity authenticity, the more positive consumers' attitudes toward the celebrity, the extensions, and purchase intention. Accordingly, the following hypotheses are developed:

H2: The effect of celebrity brand extension on attitudes toward the celebrity will be more favorable when the authenticity of the celebrity is high as compared to moderate or low levels.

H3: Consumers' attitude toward the brand extensions will be more favorable when the authenticity of the celebrity is high as compared to moderate and low levels.

H4: Consumers' purchase intentions toward the extensions will be more favorable when the authenticity of the celebrity is high as compared to moderate and low levels.

H5: Perceived authenticity of the celebrity will have a positive significant effect on post-extension attitudes toward the celebrity.

H6: Perceived authenticity of the celebrity will have a positive significant effect on purchase intention of the extension.

2.4.3 Perceived Congruency of Extension with Celebrity

Congruency is defined as "the fit between a brand and any other entity, which may be another brand, an individual, a new product category, or an event" (Mishra et al., 2015: 1161). In brand extension literature, congruency denotes how appropriate the consumer believes that the brand extension is to the parent brand (Smith & Park, 1992), either denoting similarity to the product category and/or usage situation of the parent brand (e.g., Dove soap bar/shampoo) or relevance to the parent brand's image/associations (e.g., Harley Davidson motorcycles/leather boots) (Boush & Loken, 1991; Broniarczyk & Alba, 1994). Similarly, celebrity endorsement studies indicate that as the congruency between the celebrity and the product being endorsed increases, a more positive response is achieved from consumers toward the advertisement and purchase intention (Kahle & Homer, 1985; Kamins, 1990; Misra & Beatty, 1990).

Likewise, in brand extension studies, it is evidenced that higher levels of congruency of the extension with the parent brand have elevated effects on evaluations of the extension and/or the parent brand (Aaker & Keller, 1990; Boush & Loken, 1991; Park et al., 1991; Loken & Roedder-John, 1993; Broniarczyk & Alba 1994; Gürhan-Canli & Maheswaran, 1998; Maoz & Tybout, 2002). Thus the following hypotheses are proposed:

H7: The effect of celebrity brand extensions on attitudes toward the celebrity will be more favorable the higher the perceived congruency between the extension and the celebrity.

H8: Consumers' attitudes toward the brand extensions will be more favorable the higher the perceived congruency between the extension and the celebrity.

H9: Consumers' purchase intentions to extensions will be more favorable the higher the perceived congruency between the extension and the celebrity.

H10: Perceived congruency of the extension with the celebrity will have a positive significant effect on post-extension attitudes toward the celebrity.

H11: Perceived congruency of the extension with the celebrity will have a positive significant effect on purchase intention of the extension.

3 Methodology

The research was performed in two stages. In Stage 1 "Pretests," real celebrities but hypothetical extensions were used. Three pretests were conducted for stimuli selection. The first pretest involved the generation of celebrities familiar to the subjects. The generation of celebrity names was restricted to actors/actresses of local television serials. The rationale for this is the increasing popularity of local TV series industry in Turkey in the past decade.

3.1 Selection of Celebrities

The first pretest involved 25 graduate business students of Marmara ($n = 14$) and Istanbul ($n = 11$) Universities where three open-ended questions were asked (i.e., "Which television serial actors/actresses do you find highly (moderately/low) authentic?"). A total of 55 celebrities according to varying authenticity levels (23 = High; 20 = Moderate; 12 = Low) were generated.

A second pretest was conducted for rating the generated celebrities in terms of their authenticity levels where a total of 97 undergraduate business students of Marmara ($n = 51$) and Istanbul ($n = 46$) Universities participated. *Aslı Enver* (high authenticity); *Merve Boluğur* (moderate authenticity); and *Hande Erçel* (low authenticity) were the celebrities who received the highest ratings in each level of authenticity (high, moderate, low) and thus were selected as suitable celebrities.

3.2 Selection of Hypothetical Extensions

The final pretest was carried with 18 graduate business students to generate and select the hypothetical extensions to be used in the main study. Participants were instructed to generate suitable hypothetical extensions with different congruency levels for each celebrity selected. Following the collection of the results, a class discussion was conducted where each hypothetical extension generated was

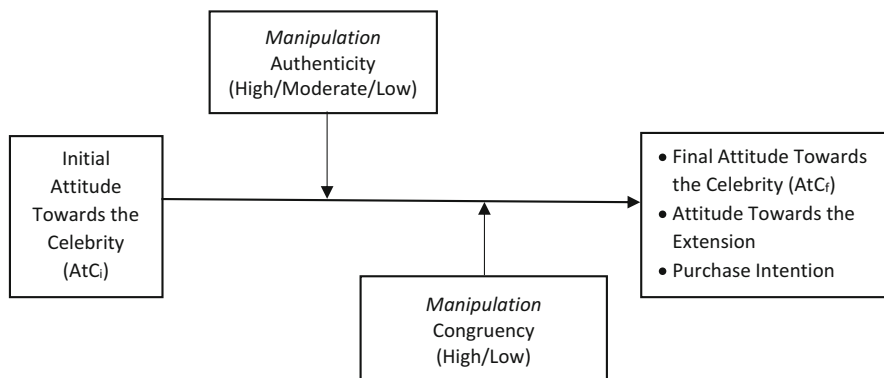


Fig. 1 Conceptual Model (Experimental Design). Source: Developed by authors

evaluated in terms of its congruency level (High/Low) with the celebrity. The hypothetical extensions that showed relevance to all three celebrities were: *skin care products* (high congruency) and *laptop computers* (low congruency) and hence were selected for the main study.

In Stage 2, for the main study, data were collected from undergraduate business students of Marmara University and Istanbul University using a 3 (authenticity: High/Moderate/Low) \times 2 (congruency: High/Low) factorial experimental design (see Fig. 1).

3.3 Questionnaire Design and Measures

Six different structured questionnaires, each of which was based on one of six different scenarios (*authenticity level*: Aslı Enver_{High}; Merve Boluğur_{Moderate}; Hande Erçel_{Low} and *congruency level*: skin care product_{HC}; laptop computer_{LC}), were used to collect the data. Hence, a between-subjects experimental design was conducted where each participant answered questions regarding one celebrity (high/moderate/low authenticity) and one hypothetical extension (high/low congruency).

In the first part of the questionnaire, the respondents were asked to evaluate the celebrity for familiarity, authenticity, and the respondents' (initial) attitudes toward the celebrity. In the second part of the questionnaire the scenario was presented (i.e., *Imagine that Aslı Enver has created a new skin care product line and has introduced it to the market. Answer the questions below keeping in mind Aslı Enver and these skin care products*). Following the scenario, the questions on congruency, attitudes toward the brand extension, purchase intention, and (final) attitudes of respondents toward the celebrity were asked. Lastly, questions regarding the demographic characteristics of the respondents took place.

For the study, existing reliable and valid scales were used. All of the constructs in the study were measured using 5-point Likert-type scales (1 = Definitely Disagree;

5 = Definitely Agree). Familiarity was measured with a 4-item scale: three items from Felix and Borges (2014); one item from Bergkvist et al. (2016). Authenticity was measured using the 3-item scale of Moulard et al. (2015). To measure the respondents’ attitudes toward the celebrity before and after introducing the hypothetical extension, the same attitude scale was used (6-item scale: 5 items from MacKenzie and Lutz (1989); one item from Fleck et al. (2012)). Perceived congruency was measured using 5-items: 4 items from Choi and Rifon (2012); one item from Dwivedi et al. (2015). The respondents’ attitudes toward the extension were measured using the 5-item scale of MacKenzie and Lutz (1989) which was adopted and modified for the brand extension context. Purchase intention for the hypothetical extensions was measured by adopting the 3-item scale of Baker and Churchill (1977). As the celebrities were all female and the hypothetically extended high congruency product was skin care products, the purchase intention items were worded as “I would think of buying the skin care products of ... for myself or for others (friends, sisters, girlfriend, etc.).”

3.4 Sampling

The sample consisted of 438 sophomore and senior undergraduate business students of Marmara and Istanbul Universities where convenience sampling was used. The use of student samples is usually a controversial issue as it may hinder the generalizability of the findings in extension studies (Peterson, 2001). Nevertheless, student samples in studies using experimental designs are preferred by many scholars (e.g., Ahluwalia & Gürhan-Canli, 2000; Chen & Liu, 2004; van Riel & Ouwersloot, 2005) as they allow for the control of extraneous variables which is an essential concern in experimental designs (Buil et al., 2009). Furthermore, when student samples are used, homogeneity is achieved concerning age, educational level, and areas of interest which ensures internal validity (Enis et al., 1972; Ferber, 1977; Lau & Phau, 2007).

Each student was randomly exposed to one of six different scenarios. The majority of the students were between 21 and 22 years of age (54.8%), women (55.9%), senior students (54.3%) with an income level of 501–3000 TL (55%). Additionally, the familiarity score for Aslı Enver was ($\bar{x} = 3.53$, $SD = 0.96$), for Merve Boluğur ($\bar{x} = 3.24$, $SD = 0.92$), and for Hande Erçel ($\bar{x} = 2.90$, $SD = 1.01$) indicating that the respondents were familiar with the celebrities used in the study (Table 1).

Table 1 Number of subjects in each experimental condition

Congruency	Authenticity			Total
	High	Moderate	Low	
High	71	78	73	222
Low	73	75	68	216
Total	144	153	141	438

Source: Own work/based on the pre-test results

4 Results

The scales were checked for reliability, validity, and dimensionality. For each construct used in the study, exploratory factor analysis (EFA) using principal components analysis and varimax rotation were conducted where all of the constructs were found to be unidimensional and all item loadings were highly above the cut-off point ($\lambda \geq 0.50$) except for one item of the familiarity scale which was excluded from further analysis. To test for reliability and validity, confirmatory factor analysis (CFA) was conducted for each construct independently. Standardized factor loadings of each item were greater than 0.50 and significant, indicating convergent validity of each construct (Fornell and Larcker, 1981). For the three-item scales, Cronbach's alpha (α) values were between 0.770 and 0.946, composite reliability (CR) scores between 0.775 and 0.946 and average variance extracted (AVE) scores were between 0.537 and 0.854. All α indices were ≥ 0.60 , $CR \geq 0.70$, and $AVE \geq 0.50$ showing that all scales showed sufficient reliability and convergent validity (Nunnally, 1978; Hair et al., 2014).

For the initial attitudes toward the celebrity, congruency, attitudes toward the extension, and final attitudes toward the celebrity constructs, the α , CR, and AVE were all above the cutoff levels (α : 0.933–0.960; CR: 0.932–0.960; AVE: 0.664–0.825). Additionally, for the constructs all standardized factor loadings were above 0.50, indicating high reliability and convergent validity. Goodness of fit indices for all constructs used in the study ($\chi^2/df = 0.0832$ – 3601 ; CFI = 1000 – 0.993 ; GFI = 1000 – 0.977 ; RMSEA = 0.000 – 0.077) were all at acceptable levels (Hair et al., 2014).

4.1 Manipulation Checks

Manipulation checks were conducted for authenticity (ANOVA) and congruency (t -tests) experimental conditions (Table 2).

Table 2 shows that for the three celebrities, significant differences exist regarding authenticity levels ($F = 64,903$, $p < 0.001$) verifying the first manipulation (Ash

Table 2 Manipulation test results

Celebrity	Authenticity	Authen. Mean (SD)	ANOVA (F)	Congruency Mean (SD) High Low		t -Test (t)
Ash Enver	High	3.55 (0.95)	64.903**	3.50 (0.84)	2.30 (0.94)	8.126**
Merve Boluğur	Moderate	2.64 (1.04)		3.71 (0.94)	2.19 (1.03)	9.500**
Hande Erçel	Low	2.22 (1.02)		2.98 (1.13)	1.84 (0.83)	6.870**

** $p < 0.001$; 5-point Likert-type scales were used; SD: standard deviation

Source: Own work/based on the data analysis

Enver_{High}; Merve Boluğur_{Moderate}; Hande Erçel_{Low}). The results of the *t*-tests indicate that there are significant differences between skin care products and laptop computers concerning congruency levels for the whole sample ($t = 13.609$, $p < 0.001$, skin care products_{HC}: $\bar{x} = 3.40$, $SD = 1.02$; laptop computers_{LC}: $\bar{x} = 2.12$, $SD = 0.96$) and for each celebrity (Aslı Enver_{High}: $t = 8.126$, $p < 0.001$; Merve Boluğur_{Moderate}: $t = 9.500$, $p < 0.001$; Hande Erçel_{Low}: $t = 6.870$, $p < 0.001$) indicating that both of the manipulations were effective.

4.2 Tests of Hypotheses

As seen in Table 3, the celebrity's introduction of an extension results in a statistically significant decline in the attitudes of the respondents toward the celebrity, regardless of the authenticity level of the celebrity nor the congruency level of the extension ($t = 7.21$, $p < 0.001$). However, when the extension shows high congruency with the celebrity, the difference between the initial and final attitudes of the respondents toward the celebrity is not significant despite the slight decline ($t = 1.14$, $p > 0.05$); whereas the difference is substantial when congruency is low ($t = 8.78$, $p < 0.001$) indicating that high congruency between the celebrity and the extension does not affect the attitudes of the consumers toward the celebrity but incongruency causes a negative effect.

There is a significant difference between the high and low congruency conditions ($t = 6.14$, $p < 0.001$). Considering the authenticity levels, for all three celebrities, there is a significant decline in the attitude of the respondents toward the celebrity once an extension is introduced, regardless of the congruency level ($F = 13.21$, $p < 0.001$). Hence H1 finds support. It should be noted that the decline is harsher for the High (3.74 \rightarrow 3.19) authenticity condition as compared to the Moderate (3.07 \rightarrow 2.91) and Low (2.38 \rightarrow 2.27) authenticity conditions ($F = 13.21$, $p < 0.001$) (see Fig. 2).

In addition to the authenticity treatment when the congruency treatment is taken into account, similar results are achieved. Specifically, when the extension has high congruency with the celebrity (see Table 3), although there is a decline in post-extension attitude toward the celebrity, the amount of decline is less (AtC variation = 0.41–0.03) as compared to the low congruency conditions (AtC variation = 0.68–0.27). For the high congruency condition, the difference in attitude toward the celebrity is insignificant when the authenticity of the celebrity is Low (L_{HC}: AtC variation = -0.03 , $p = 0.49$). Moreover, as the authenticity level of the celebrity increases, the decline in post-extension attitude toward the celebrity is more severe for both of the congruency conditions (L_{LC}: AtC variation = 0.27, M_{LC}: AtC variation = 0.54, H_{LC}: AtC variation = 0.68; L_{HC}: AtC variation = -0.03 , M_{HC}: AtC variation = -0.19 , H_{HC}: AtC variation = 0.41). Hence H1, H2, and H7 are supported.

According to the varying levels of perceived authenticity of celebrities and congruency of the extensions with the celebrities, the differences in attitudes toward

Table 3 Variations in attitude toward celebrity (Initial, Final, Variation)

Authenticity	Congruency	AtC _i Mean (SD)	AtC _f Mean (SD)	AtC Variation Mean (SD)	t Test (t)	ANOVA/t-test (F/t)
-	-	3.07 (1.12)	2.79 (1.07)	0.28 (0.80)	7.21**	-
-	High	3.02 (1.10)	2.96 (1.07)	0.52 (0.68)	1.14	t = 6.14**
-	Low	3.12 (1.13)	2.62 (1.05)	0.50 (0.84)	8.78**	
High	-	3.74 (0.90)	3.19 (0.94)	0.55 (0.83)	7.93**	F = 13.21**
Moderate	-	3.07 (0.99)	2.91 (1.06)	0.17 (0.81)	2.54*	
Low	-	2.38 (1.04)	2.27 (1.00)	0.11 (0.68)	2.02*	
High	High	3.76 (0.87)	3.35 (0.89)	0.41 (0.75)	4.54**	F = 17.09**
Moderate	High	2.90 (0.95)	3.09 (1.06)	-0.19 (0.60)	2.79**	
Low	High	2.42 (1.05)	2.45 (1.06)	-0.03 (0.55)	0.49	
High	Low	3.72 (0.93)	3.03 (0.96)	0.68 (0.88)	6.66**	F = 4.35*
Moderate	Low	3.25 (0.10)	2.71 (1.04)	0.54 (0.84)	5.53**	
Low	Low	2.34 (1.04)	2.07 (0.91)	0.27 (0.77)	2.96**	

*p < 0.05; **p < 0.001; 5-point Likert-type scales were used; SD: standard deviation

Source: Own work/based on the data analysis

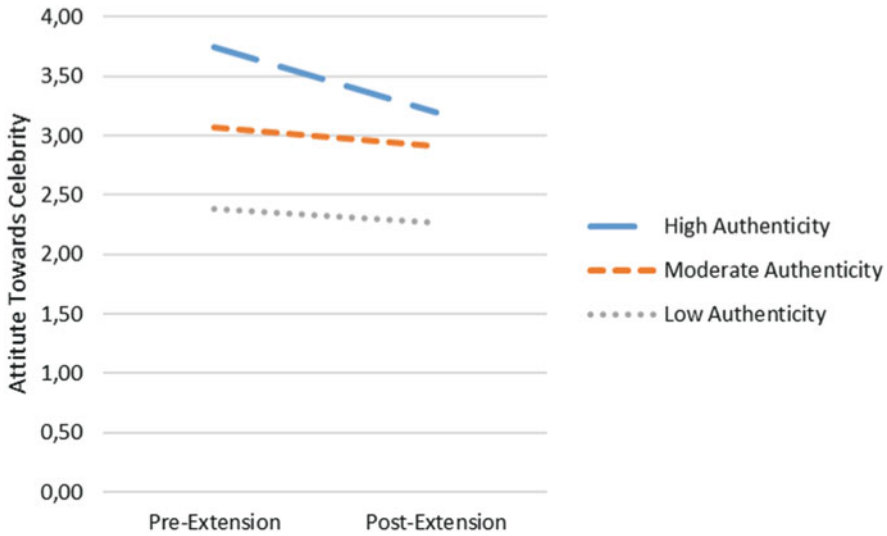


Fig. 2 Variations in attitudes towards the celebrity when an extension is introduced (Pre-/Post-extension). Source: Own work/based on the data analysis

Table 4 Effects of authenticity and congruency on attitudes towards the extension and purchase intention

Authenticity	Congruency	Att. toward extension (AtE) Mean (SD)	ANOVA/ <i>t</i> -test (<i>F</i> / <i>t</i>)	Purchase intention (PI) Mean (SD)	ANOVA/ <i>t</i> -test (<i>F</i> / <i>t</i>)
--	--	2.47 (1.06)	--	2.19 (1.08)	--
--	High	2.80 (1.04)	<i>t</i> = 7.08**	2.48 (1.11)	<i>t</i> = -6.06**
--	Low	2.12 (0.97)		1.89 (0.95)	
High	--	2.75 (0.97)	<i>F</i> = 19.50**	2.41 (1.09)	<i>F</i> = 10.07**
Moderate		2.60 (1.09)		2.27 (1.12)	
Low		2.04 (0.97)		1.87 (0.95)	
High	High	3.06 (0.90)	<i>F</i> = 8.35**	2.69 (1.10)	<i>F</i> = 6.84**
Moderate		2.94 (1.09)		2.65 (1.11)	
Low		2.41 (1.02)		2.10 (1.03)	
High	Low	2.46 (0.96)	<i>F</i> = 15.58**	2.14 (1.02)	<i>F</i> = 5.37**
Moderate		2.25 (0.99)		1.87 (0.98)	
Low		1.63 (0.73)		1.63 (0.78)	

p* < 0.05; *p* < 0.001; 5-point Likert-type scales were used
 Source: Own work/based on the data analysis

the extension and purchase intention were tested using a series of ANOVA and *t*-tests (Table 4).

As seen in Table 4, taking into consideration the levels of congruency of the extension with the celebrity, significant differences exist in the attitudes toward the extension (*t* = 7.08, *p* < 0.001) and purchase intention (*t* = 6.06, *p* < 0.001) where

Table 5 Regression Analysis Results (Whole Sample)

	Dependent Variable			
	Post-Ext. Att. toward Celebrity		Purchase intention	
	(β)	(<i>t</i>)	(β)	(<i>t</i>)
Constant	0.462**	4.030	0.327*	2.592
Authenticity	0.418**	12.128	0.132**	3.488
Congruency	0.490**	14.231	0.600**	15.881
Adj. R^2	0.513	--	0.413	--
VIF	1.064	--	1.064	--

* $p \leq 0.05$, ** $p \leq 0.001$

Source: Own work/based on the data analysis

Table 6 Effects of authenticity and congruency on post-extension attitudes toward the celebrity (Experimental conditions)

	High congruency			Low congruency		
	Auth. (H) β	Auth. (M) β	Auth. (L) β	Auth. (H) β	Auth. (M) β	Auth. (L) β
Constant	0.521	-0.052	0.145	0.657	0.567	0.669*
Authenticity	0.252*	0.265*	0.307**	0.401**	0.422**	0.310*
Congruency	0.554**	0.594**	0.576**	0.343**	0.427**	0.391**
Adj. R^2	0.450	0.557	0.574	0.328	0.372	0.316
VIF	1.129	1.268	1.258	1.065	1.006	1.151

Dependent variable: Post-extension attitudes toward the celebrity, * $p \leq 0.05$, ** $p \leq 0.001$

Source: Own work/based on the data analysis

the more congruent the extension, the higher the attitude toward the extension and purchase intention.

When only the authenticity experimental condition is considered, significant differences exist in attitudes toward the extension ($F = 19.50, p < 0.001$) and purchase intention ($F = 10.07, p < 0.001$) where the higher the level of authenticity of the celebrity, the higher the attitudes toward the extension and purchase intention. When the authenticity of the celebrity increases and the congruency of the extension with the celebrity is high, the attitude toward the extension and purchase intention are also higher as compared to lower conditions (see Table 4).

As seen in Table 4, for all three authenticity conditions, significant differences were achieved for attitude toward the extension and purchase intention taking into consideration high/low congruency levels where the higher the authenticity and congruency levels, the higher the attitude toward the extension and purchase intention. Moreover, the results show that in all three situations the means are higher for attitude toward the extension as compared to purchase intention. Thus H3, H4, H8, and H9 are supported.

To test H5, H6, H10, and H11 multiple regression analyses were conducted (see Tables 5, 6, and 7). The results of the regression analyses (Table 5) show that for the whole sample, authenticity and congruency have significant effects on post-extension attitudes toward the celebrity where congruency ($\beta = 0.490$) has a higher

Table 7 Effects of authenticity and congruency on purchase intention (Experimental conditions)

	High congruency			Low congruency		
	Auth. (H) β	Auth. (M) β	Auth. (L) β	Auth. (H) β	Auth. (M) β	Auth. (L) β
Constant	-0.018	-0.388	0.278	1.071*	0.184	0.974**
Authenticity	0.059	0.148	0.082	-0.100	0.193*	0.079
Congruency	0.547**	0.601**	0.603**	0.597**	0.565**	0.302*
Adj. R^2	0.305	0.451	0.399	0.318	0.357	0.088
VIF	1.129	1.268	1.258	1.065	1.006	1.151

Dependent variable: Purchase intention, * $p \leq 0.05$, ** $p \leq 0.001$

Source: Own work/based on the data analysis

effect compared to authenticity ($\beta = 0.418$). On the other hand, congruency ($\beta = 0.600$) has a dominant effect on purchase intention as compared to authenticity ($\beta = 0.132$) where both have significant effects. Thus H5, H6, H10, and H11 are supported.

The regression analyses were repeated for the varying experimental conditions (Tables 6 and 7).

Both authenticity and congruency have significant effects on the post-extension attitudes toward the celebrity where for all situations the effect of congruency is higher compared to authenticity except for the situation where congruency is low and authenticity is high. Thus, H5 and H10 are supported for the varying experimental conditions as well.

The dominant effect of congruency on purchase intention indicates that when consumers are faced with a new celebrity brand extension in the market, their intention to purchase depends mainly on whether the extended product is congruent with the celebrity or not; and not on the perceived authenticity of the celebrity. Thus, H6 finds no support but H11 does for the various experimental conditions.

5 Discussion

Celebrities “are easily recognized and attract attention” all over the world and therefore have positive effects on the promotion and sales of brands (Choi & Rifon, 2012: 647). Studies on celebrities as human brands and celebrity brand extensions are extremely limited. This study makes a contribution to extant literature by considering a celebrity as a human brand and examining celebrity brand extensions regarding the effects of authenticity and congruency on evaluations of the celebrity/brand extension and purchase intention.

In view of the findings of this study, several issues deserve attention. Firstly, there is a significant deterioration in attitudes toward the celebrity when a celebrity extends his/her name into a new product category. However, this deterioration is much more severe for the celebrity who is perceived as having high authenticity.

This may be due to the belief that when a celebrity is successful, the consumer expects that he/she should concentrate on what he/she does best (*acting* in this study) and not direct his/her attention to other areas. This result is quite similar to the findings of Kowalczyk and Royme (2013) where it was found that the higher the attachment of consumers to the celebrity, the lower their attitudes toward the extension. This finding is also compatible with the results of prior brand extension studies where it was found that the dilution of image is greater for the more prestigious parent brand as compared to the less prestigious parent brand (e.g., Martínez & de Chernatony, 2004; Arslan & Altuna, 2010).

Secondly, this study provides evidence that the higher the congruency between the celebrity and the brand extension, the better the evaluations of consumers on attitudes toward the celebrity, attitudes toward the extension, and purchase intention. This result is parallel to past findings on brand extension and also celebrity endorsement studies where the higher the congruency between the parent brand and the extension (the endorser and the endorsed brand), the more positive the attitudes toward the extension (the endorsed product/advertisement) (e.g., MacKenzie & Lutz, 1989; Martínez & de Chernatony, 2004; Arslan & Altuna, 2010) and the greater the purchase intention (e.g., Kahle & Homer, 1985, Misra & Beatty, 1990; Kamins, 1990). As expected, these findings validate the use of congruency/match-up theory for celebrity brand extensions.

Thirdly, to the knowledge of the authors, this study is the first to test the effects of varying perceived authenticity levels of celebrities on attitudes toward the celebrity/brand extension and purchase intention. Specifically, the higher the perceived authenticity of the celebrity, the harsher the deterioration of attitudes toward the celebrity and the extension and the lower the level of purchase intention. This finding is interesting and needs further research attention.

A noteworthy finding is that, consistent with past research, perceived celebrity authenticity is a predictor of purchase intention (Ilicic & Webster, 2014, 2016; Kowalczyk & Pounders, 2016) only when the experimental conditions are not taken into account where this effect becomes insignificant when the sample is split according to the experimental conditions. Furthermore, results show that when the consumer cannot find any congruency between the celebrity and the brand extension, his/her perception of the authenticity of the celebrity is what positively affects his/her attitude toward the celebrity. Further examination concerning these relationships will be thought provoking.

One final interesting finding of this study is that, consumers' attitudes toward the celebrity and the brand extension are much higher than their purchase intention for the extended product. This suggests that even if consumers have high attitudes toward celebrity brand extensions, this does not mean that their sale is warranted. This result may be a productive venue for further research.

6 Managerial Implications

Nowadays interest in celebrities is rising exponentially. In using celebrities as part of a company's marketing/branding strategies one of the most critical decisions is the selection of a suitable celebrity. The same concern also exists for celebrities who manage their name just like a company. Celebrity brand extensions have also become a major industry all over the world. Hence there is a need for a better understanding of human brands, in particular celebrity brands, and the effects of celebrity brand extensions on attitudes toward the celebrity, the brand extension, and purchase intention. The findings of this study may shed light on the critical factors that should be tailored deliberately not only for the extension's success but also to protect and/or enhance the attitudes toward the celebrity. The findings of this study indicate that for celebrities who are perceived as having high authenticity it is a better idea not to introduce any brand extensions as it causes a decline in the attitudes toward the celebrity. Despite all the risks, if marketing managers and/or the celebrity insist on extending the name of the celebrity into a new category, it is advised that it should be made sure that the extension has high congruency with the celebrities' persona. Marketing managers are advised to find creative ways to convey messages that the celebrity is highly authentic. Additionally, choosing product categories that are highly congruent with the celebrity brand is highly crucial.

7 Conclusion

Although, there is vast research on celebrity endorsements, the studies focusing on celebrities as human brands and examining the products and services launched by the celebrities as extensions of their self-brands are highly limited. This paper aims to fill this gap by examining primarily the feedback effects of celebrity brand extensions on attitudes towards the celebrity. Secondly, the effects of different levels of perceived authenticity of the celebrity and the congruency levels between the extension and the celebrity on post-extension attitudes toward both the celebrity and the extension and purchase intentions are examined. Results reveal a significant deterioration in attitudes toward the celebrity when a celebrity extends his/her name into a new product category particularly for the celebrities with higher authenticity. Moreover, the evaluations of consumers on attitudes toward both the celebrity and the extension and purchase intention improves in situations when the congruency between the celebrity and the brand extension is higher. Similarly, when the authenticity level of the celebrity increases, the deterioration of attitudes toward the celebrity and the extension is harsher where purchase intention is also decreased. According to the results of the study, perceived celebrity authenticity and congruency between the celebrity and the extension are predictors of purchase intention.

8 Limitations and Future Research Directions

The main limitation of the study is the use of a student sample. However, it should be noted that data were collected from two of the most crowded universities in Istanbul. Conducting the study on students has resulted in a sample made up of millennials. Young people may have more positive feelings toward celebrities as compared to older people. Therefore, replicating the study for other ages or generational cohorts and on different cultures would provide further evidence. Another limitation is the use of a non-probable sampling method, convenience sampling, which restrains the generalizability of the results.

To increase external validity real celebrities but hypothetical extensions were presented to the subjects. Even though the extensions were generated in the pretests, in future studies the use of real extensions may allow more representative results. Celebrities used in the experimental design, who were actresses appearing in Turkish television serials. This is an important limitation as it decreases the generability of the results. Also, as only female celebrities were included in the study, the attitude toward the celebrity may differ according to the gender of the respondents. Lastly, the inclusion of perceived risk and involvement as additional variables in the research model would be worthwhile to enhance the findings and may provide deeper insights.

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Determining the Impacts of Online Customer Reviews on International Students' Online Hostel Booking Intentions: A Preliminary Study



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Abstract With the rapid growth in the number of international student enrollment, Taiwan is increasingly becoming one of the popular academic destinations in East Asia. While University on-campus accommodation is typically limited, most international students are required to find accommodation off-campus. Also, students prefer to live in youth hostels while traveling around the island. Students mostly use online platforms to find and book accommodation facilities like youth hostels, dormitories, and hence the online customer reviews (OCR) are critically important for students' decision-making. The main purpose of this preliminary research is to determine the impacts of positive and negative online customer reviews (OCR) on international students' online hostel booking intention. In addition, it explores the moderating effects of price consciousness and booking website or app reputation. Data collected from 109 international students in Taiwan were analyzed with the help of the partial least squares structural equation modeling (PLS-SEM) approach to test the hypothesized relationships. Results indicate that negative OCR significantly impacts students' online hostel booking intention while positive OCR does not. Results further indicate that student price consciousness significantly moderates the relationship between negative OCR and students' online hostel booking intention. We believe the findings of this study are beneficial for businesses in the hospitality and tourism industry for creating an online review management strategy.

Keywords International students · Hostel booking intention · Online customer reviews · Price consciences · Website reputation

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1 Introduction

The rapid developments in information and communication technologies (ICT) have created a significant impact on various industries, including the hospitality and tourism industry. Advances and penetration of e-commerce/m-commerce businesses have offered businesses several benefits such as instant market information, electronic business transactions, and access to customers worldwide (Shanker, 2008). But at the same time, technology has enabled customers not only to access information easier and faster but also to interact with each other through various platforms like blogs, forums, social networking websites, etc. Earlier research pertinent to the hospitality and tourism industry suggests that customers tend to rely on information about hotel products and services provided by fellow customers while making a decision (Senecal & Nantel, 2004; Zhao et al., 2015; DelChiappa et al., 2018). In other words, peer reviews or sometimes referred to as online customer reviews (OCR) are critical information sources for customer decision-making. In general, customers believe that these reviews are unbiased, independent, and trustworthy, and hence they may more faith in the peer reviews than that of the information provided by the company (Zhao et al., 2015). Previous research indicates that online customer reviews significantly affect customers' overall intention to book a property online (Gursoy, 2019; El-Said, 2020).

With the increasing number of international student enrollment, Taiwan is increasingly becoming one of the popular academic destinations in East Asia. In 2018, over 126,900 international students enrolled in Taiwan, which accounted for about 10% of the total number of college and university students for that year (DeAeth, 2019). Apart from a strong education system in Taiwan, scholarships, affordable tuition fees, and living costs are the reasons why the island is receiving an increasing number of international students (Collier, 2018). Modern infrastructure, culture, food, safety, convenient life, and natural beauty are additional motivations for international students to visit Taiwan. While University on-campus accommodation is typically limited, most international students are required to find accommodation off-campus. Also, students prefer to live in youth, backpacker hostels while traveling around the island. Students typically use websites and/or mobile apps and rely on OCR for confirming their reservations.

Previous research has extensively explored the impact of OCR on customer's booking intention in the hotel context (Zhao et al., 2015; El-Said, 2020). However, current research offers a limited understanding of the impact of OCRs on students' hostel booking intention. Given that the numbers of hostels in Taiwan are increasing with the number of foreign tourists as well as students, it is critical to investigate relationships between negative and positive OCRs and students' hostel booking intention. Moreover, it is important to examine whether factors such as customer price consciousness, booking website, or app reputation affect these relationships.

The main objective of this preliminary study is to assess the impacts of negative and positive OCRs and students' hostel booking intention. The other objective of this research is to test if student price consciousness and booking website or app

reputation moderate the relationship between OCRs and hostel booking intention. In order to address these objectives, this study partially extends the research model proposed by El-Said (2020) into the hostel context. Further, it tests the abovementioned moderating relationships. Data collected from 109 questionnaires were used to test these relationships with the help of the partial least square structural equation modeling (PLS-SEM) technique. Results indicate that negative OCR significantly affects students' hostel booking intention but positive OCR. Results further show that student price consciousness moderates the relationship between negative OCR and students' hostel booking intention. We believe the findings of this study can help businesses in the hospitality and tourism industry while crafting an online management strategy.

2 Literature Review and Hypotheses Development

According to Brochado et al. (2015), a hostel refers to “good quality budget accommodation that offers a comfortable night’s sleep in friendly surroundings at an affordable price.” Hostels are popular for offering cheaper accommodation facilities with shared rooms and sometimes some private rooms where typically young people stay for short periods. The key difference between a typical hostel and a hotel is that the hostel provides the sharing space such as the living room, kitchen, restroom, and bedrooms, while the hotel has more privacy and a higher price. In Taiwan, customers can find hostels as cheaper as US 10\$ per day. The importance of OCRs has been widely emphasized by previous research related to the hospitality and tourism industry (Zhao et al., 2015; El-Said, 2020). According to Mauri and Minazzi (2013, p. 2), “positive reviews refers to favorable experiences and a consequent recommendation of the product to other customers, whereas negative feedback refers to unfavorable experiences and are meant to dissuade others from buying that product.”

There is an abundant amount of research investigating the relationship between OCRs and customer decision-making in the context of hotels. However, only a few studies in the hostel context have explored the impacts of online reviews on customer decision-making and behavior. Cró and Martins (2017) investigated the impacts of hostel guest reviews on hostel price premiums and found that customers' willingness to pay is higher if the hostel has higher levels of security, cleanliness, and locational advantage. Amblee (2015) examined the role of cleanliness in shaping customer perceptions of security in hostels and indicated that customer perceptions of hostel security are primarily determined by the cleanliness of the establishment, followed by its location. Martins et al. (2018) researched the determinant factors that affect guests' satisfaction while staying at a low-budget accommodation such as a backpacker hostel. Their finding emphasizes the customer satisfaction is associated with the importance of the backpackers' experience, and hence, the importance of team, friendliness, hostel location is critical. Brochado et al. (2019), in an empirical study, compared the patterns in online reviews of Beijing and Lisbon hostels and

concluded that a negative relationship between the hostels' overall ratings and guests' level of experience with hostels.

Previous interdisciplinary research indicates that both positive and negative reviews significantly affect customers' purchase intention (Ketelaar et al., 2015). However, prior tourism literature offers mixed results when it comes to the relationship between positive or negative OCRs and customer booking intentions. Previous tourism literature reported the significance of both positive and negative reviews in relation to customers' booking intention (Sparks & Browning, 2011). Ye et al. (2009) showed that positive online reviews cause an increase in the number of hotel bookings compared to online negative reviews. Bulchand-Gidumal et al. (2013) found that positive reviews are more frequent in the hospitality and tourism industry. They concluded that online reviews have a significant positive impact on hotel bookings intentions. Rizwan et al. (2019) studied the impact of online consumer reviews on hotel booking intentions in Pakistan. The results suggest that realism, the volume of reviews and positive reviews influence customers' hotel booking intentions. Previous research also depicts the notion of the boomerang effect, a persuasion attempt because of which positive reviews decrease while negative reviews increase customers' purchase intention (Reimer & Benkenstein, 2016). Avant (2013) showed that negative OCRs shared on social travel networks have a stronger impact on customer booking intention than positive OCRs. El-Said (2020) concluded that negative OCR significantly impacts customers' intention to purchase while positive OCRs do not. As mentioned earlier, the current research builds a research model on the basis of El-Said's (2020) work and extends it into the hostel context to determine whether positive and negative OCRs impact international students' online hostel booking intention. In the light of the above arguments, we hypothesize that:

H1: Positive OCRs significantly affect students' hostel booking intention.

H2: Negative OCRs significantly affect students' hostel booking intention.

The notion of price consciousness has been extensively researched in earlier research (Lichtenstein & Ridgway, 1993; Guazente & Roy, 2012; Hansen, 2013; Kukar-Kinney et al. 2007; Roy et al. 2016). There are several definitions of price consciousness in literature. One of the most popular and most cited definitions is given by Lichtenstein and Ridgway (1993, p. 235). Accordingly, price consciousness is given as "the degree to which the consumer focuses exclusively on paying a low price." Hansen (2012, p. 1) defined price consciousness as "an individual trait that differentiates consumers based on the weight they give to price when evaluating or purchasing products."

Although limitedly explored in tourism research, previous marketing literature has extensively researched price consciousness. Hansen (2013) found a significant negative relationship between price consciousness and customer purchase intention for new food products. He indicated that price consciousness mainly affects the intentions of customers who are capable of drawing inferences about product price on the basis of their knowledge of the product category. It also suggests that price consciousness is linked with customer information processing because highly

price-conscious customers tend to focus on price-related information thoroughly. Such customers are likely to spend more time to evaluate product features carefully (Guazente & Roy, 2012). On the other hand, customers with lower price consciousness are not very involved in the price aspect of the purchase and contribute less effort in price search (Lichtenstein & Ridgway, 1993; Kukar-Kinney et al., 2007).

Given that international students are going to live in the host country for a reasonable amount of time, their concern for saving money must be taken into account. Positive and negative OCRs are one of the key sources that help such customers to evaluate hostel information. Therefore, we believe that various levels of price consciousness affect the relationship between positive and negative OCRs and hostel booking intention.

H3a: Price consciousness moderates the relationship between positive OCRs and students' hostel booking intention.

H3b: Price consciousness moderates the relationship between negative OCRs and students' hostel booking intention.

Website reputation is a well-researched topic in e-commerce literature (Park & Lee, 2009; Kim & Lennon, 2013; Li, 2014). Kim and Lennon (2013) examined the impacts of website reputation and quality on consumers' emotions, perceived risk, and purchase intention. They found website reputation positively affects customer emotion in terms affects purchase intention. Their result also indicates that website reputation negatively affects perceived risk. Park and Lee (2009) found a positive relationship between website reputation and e-Word-of-Mouth (e-WOM). The results further show that the e-WOM effect was found to be greater for websites with established reputations than that of unestablished websites. Li (2014) investigated the impact of website-related factors such as disposition to privacy, the perceived reputation of a website, and personal familiarity on a person's privacy concerns and indicated a negative relationship between website reputation and privacy concerns. Oghazi et al. (2020) found that females are likely to have higher levels of purchase intentions with increasing levels of online retailer reputation than males. Online retailer website reputation reflects positive customer emotions and low perceived risks (Kim & Lennon, 2013), and hence customers perceive it as a credible source. The websites customers use for searching hostels are the vehicles that enable customers to not only find and process information but also make reservations and provide after-sales support. We believe that the online retailer website's reputation affects the relationship between OCRs and students' hostel booking intention.

H4a: Online retailer website reputation moderates the relationship between positive OCRs and students' hostel booking intention.

H4b: Online retailer website reputation moderates the relationship between negative OCRs and students' hostel booking intention.

3 Methodology

This study employs a questionnaire survey approach to test hypothesized relationships. In doing so, a survey was built from the pool of items developed from extant relevant literature. The survey was screened and revised with the help of academic experts. A pilot test with 15 students was performed, and the survey was further refined. The questionnaire was comprised of two sections, demographics and the main survey. A five-point Likert scale ranging from strongly disagree (1) to strongly agree (5) was used to test all latent variables (Fig. 1). The final survey was distributed through online platforms such as Facebook, targeting international student groups in Taiwan. We received about 141 responses, of which only 109 found usable. The data was collected in the second and third quarters of 2020. Demographics of collected data are presented in Table 1.

Before testing the proposed hypotheses, confirmatory factor analysis was employed using SmartPLS version 2.0.M3. It can be clearly seen from Table 2 that factor loadings of all items, average variance extracted (AVE), and composite reliability (CR) exceeded the recommended threshold of 0.5, 0.5, and 0.7, respectively. Cronbach’s alpha values for positive OCRs, behavioral intention, retailer website reputation, and price consciousness were fairly high as they surpassed 0.75.

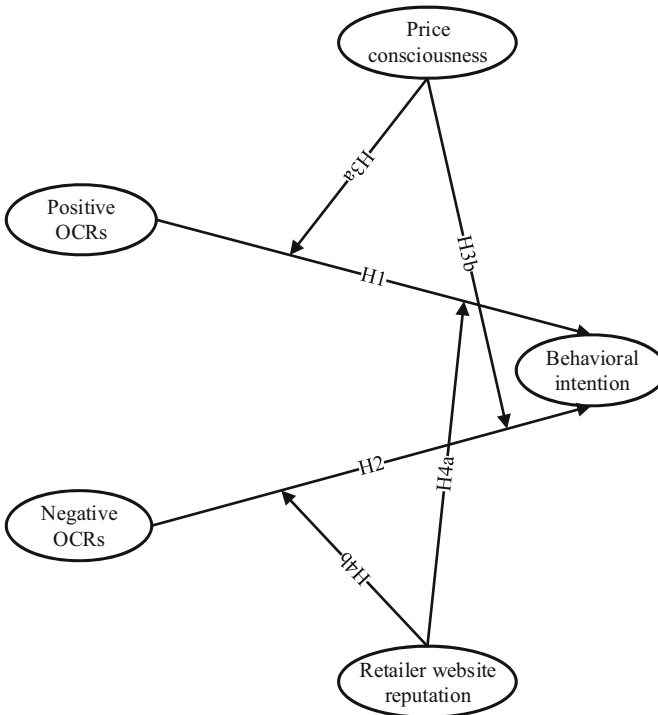


Fig. 1 Framework of this research. Source: own work

Table 1 Received data demographics for this research in 2020

Variable	Frequency	Percentage (%)
Gender		
Male	76	69.70
Female	33	30.30
Age		
18–24	66	60.60
24–34	32	29.40
>34	11	10.10
Education		
Undergraduate	58	53.20
Master’s and above	51	46.80
Marital status		
Single	100	91.70
Married	09	08.30
Annual income (USD)		
<750	42	38.50
<1500	49	45.00
<2500	16	14.70
>2500	02	01.8
Stayed in Taiwan		
<6 Mon	42	38.60
<1 year	47	43.10
<1–3 years	17	15.60
>3 years	03	02.80
Original purpose to visit Taiwan		
Education	97	89.00
Work	07	06.40
Traveling	05	04.60
Region of origin		
North America	33	30.03
South America	05	04.60
Europe	11	10.10
South-East Asia	56	51.40
North-East Asia	04	03.70

Source: own work

Cronbach’s alpha value for negative OCRs was found to be 0.60, which is slightly low but in the acceptable range as per previous research (Taber, 2018). The square root of AVE was higher than inter-construct correlations confirmed discriminant validity. Therefore, the overall reliability and validity criteria for the measurement model were satisfied.

Table 2 Scales

Variable	Item description	Factor loading
Positive OCRs (AVE = 0.63; CR = 0.87) (Zhao et al., 2015; El-said, 2020)		
PR1	I pay more attention to positive reviews while booking a hostel online	0.92
PR2	I pay more attention to hotels that have larger volume of positive reviews	0.87
PR3	I pay more attention to hostels with more positive reviews than others	0.70
PR4	I think positive reviews are of more value	0.65
Negative OCRs (AVE = 0.55; CR = 0.78) (Zhao et al., 2015; El-said, 2020)		
NR1	An abundance of positive reviews will make me dislike a hostel	0.62
NR2	In general, negative reviews terminate my booking intentions	0.91
NR3	The volume of negative reviews is important	0.66
Price consciousness (AVE = 0.75; CR = 0.90) (Mallinson et al., 2016)		
PC1	It is important to me that I get quality for the money I am going to pay	0.85
PC2	I compare prices between various hostels in order to get the best value for money	0.88
PC3	I always try to get the best quality for the best price	0.86
Retailer website reputation (AVE = 0.56; CR = 0.83) (Li, 2014; Kim and Lennon, 2013)		
WR1	The website/app I used for booking is well-known	0.80
WR2	The website/app I used has a good reputation	0.85
WR3	The website/app I used is one of the largest companies that everyone recognizes	0.73
WR4	The website/app I used has a good reputation compared to other rival websites/app	0.59
Hostel Booking Intention (AVE = 0.66; CR = 0.85) (Lien et al., 2015; El-Said, 2020)		
INT1	Online reviews are my main information channel before I book a hostel	0.76
INT2	Online reviews affect my intention to book a certain hostel	0.85
INT3	The probability that I would consider online reviews before hostel booking is high	0.82

Source: own work

4 Hypotheses Testing and Results

The hypothesized relationships were tested with a bootstrap resampling frequency of 900 using the partial least squares-based structural equation modeling technique. The results indicate that negative OCRs have a negative but statistically significant while positive OCRs have no significant impact on students' hostel booking intention. Previous research suggests that the moderating effects should be analyzed when the relationship between the predictor and the dependent variable is statistically significant (Hayes, 2018; El-Said, 2020). Therefore, this study only tests the moderating effect of price consciousness and website reputation in relation to negative OCRs and students' hostel booking intention. In order to test the moderation effects of these variables, two latent interaction variables were created by multiplying these

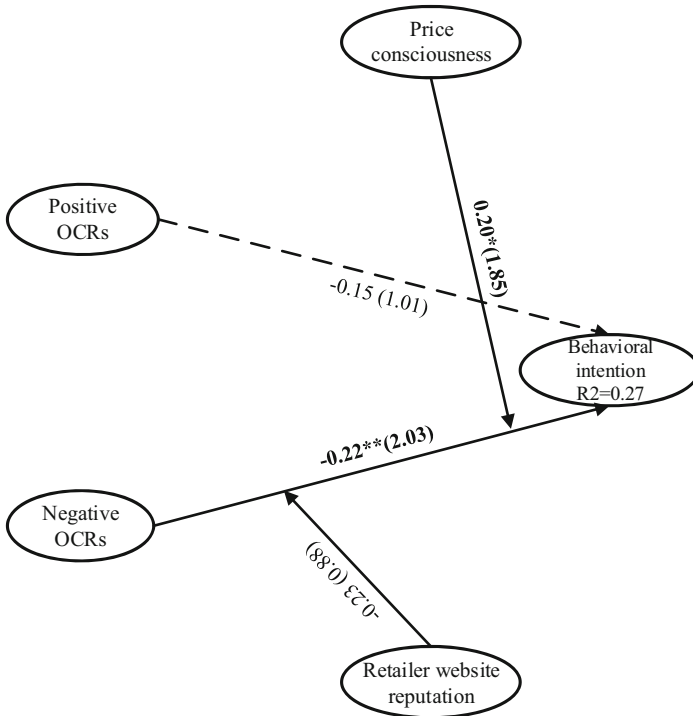


Fig. 2 Structural model. Source: own work. Note: * $p < 0.1$, ** $p < 0.05$, T -statistics are shown in parentheses

variables with the predictor variable, negative OCRs. Figure 2 shows the structural model along with path coefficients and their significance levels.

It can be clearly seen from Fig. 2 that only hypotheses H2 and H3b were supported. Since H1 was unsupported, H3a and H4a were consequently unsupported. In addition, H4b was not supported.

5 Discussion and Conclusion

This study aims to investigate the impacts of positive and negative OCRs on students’ hostel booking intention. It also examines the moderating effects of price consciousness and retailer website reputation on students’ hostel booking intention. Data collected from 109 international students in Taiwan were analyzed by employing partial least squares-based structural equation modeling technique. Retailer website reputation has had no significant moderating effect on the relationship between negative reviews and hostel booking intention. The result finally indicates that negative OCRs had a negative significant impact on hostel booking

intention while positive OCRs had not. This result is consistent with Zhao et al. (2015)'s research in the hotel context. Although positive OCRs had no significant relationship with hostel booking intention, the path coefficient of the relationship was negative. According to Reimer and Benkenstein (2016), negative causality is a result of untrustworthy reviews. This indicates that students tend not to trust positive reviews.

Results further indicate that price consciousness moderates the relationship between negative reviews and hostel booking intention. This result indicates that consumer price consciousness would weaken the strength of the relationship between negative OCRs and hostel booking intention. In other words, the impact of negative OCRs is critical for customers having lower price consciousness than that of higher price consciousness. The managers of the hostel should pay deep attention to positive OCRs, negative OCRs as well as their balance. A careful and proactive approach could be useful while providing feedbacks, especially on negative OCRs. It is critical for hostel managers to identify and improve their understanding of customers' requirements and complaints. Likewise, it is also important to understand the complaint focus and associated root causes. Accordingly, managers should develop strategies to resolve customer complaints. Managers are recommended to concentrate their efforts on improving service quality, staff training, and customer communication. It is important for managers to identify and report improvements required in rules, regulations, and policies to senior management. A third-party endorsement on reviews will improve review trustworthiness. Hostel managers can systematically approach key business partners as well as existing reputed businesses such as travel companies, popular restaurants, movie theaters, etc., for strategic endorsements.

6 Limitations and Future Research

It should be noted that this preliminary study has been performed with an adequate but small sample size; therefore, its findings should be used with caution. Future research can validate the findings of this study by performing research with comparatively large sample size. The scope of this study is limited to OCRs and consumer behavioral intention. Future research can include key characteristics of the reviews, such as usefulness, volume, timeliness, comprehensiveness, etc., in the research model. Also, it is worthwhile to investigate the moderating effects of related variables such as brand image, virtual design of the retailer website, etc.

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Motivation Toward Plugin Hybrid Electric Vehicles to Reduce Transport Carbon Emission in Malaysia: A Conceptual Paper



Haider Ali Abbasi, Zullina Bt Hussain Shaari, Wajiha Moughal, and Izwan Nazirin Bin Ismail

Abstract The transport sector is the leading source of growing greenhouse gas (GHG) emissions globally. Malaysia ranks 26th globally in carbon emission, and the transport sector is the second most GHG emitter after electricity generation. Vehicles produce 85.2% of emissions and 59% of emissions come from private vehicles in Malaysia, and the best possible way to reduce transport emissions is the diffusion of Plugin Hybrid Electric Vehicles (PHEVs). The PHEVs operate on the electric battery as the battery power depletes, then start operating on a conventional engine. Consumers are observed not aware of these vehicles' features, and their motivation is not efficient that is why the purchase of the electric vehicle is very low. Social media is a very effective tool of marketing to aware consumers, worldwide more than 51% on earth use social media, and in Malaysia, almost 81% population is active social media users. Social media can play a significant role in enhancing motivation. The study's conceptual framework is thoroughly based on secondary data that combined the incoherent frameworks proposed by different authors into a single study. This study proposed the factors that can motivate and encourage consumers to purchase these vehicles. It will also be helpful for the government to reduce the carbon emission level in pursuing Carbon Neutral Nation 2050 and Greentech Master Plan 2030 target.

Keywords PHEVs · Sustainability · Transport emission · Motivation · Social media · Adoption

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1 Introduction

Dynamic climate and increasing greenhouse gases emission are the leading global concerns nowadays. Global warming discussions cover its origins and consequences, responsible departments for warmings, and what steps should be taken to reduce the adverse effects of greenhouse gas emissions. Fossil fuel burned worldwide is responsible for carbon and greenhouse gas emissions (Farooqi et al., 2021). And passenger vehicle is responsible for 60% of carbon emission from transportation. The transport sector is among the leading source of carbon emission worldwide that is growing faster, often at a higher rate than the Gross National Product (GNP) of developing countries (Schipper & Marie-Lilliu, 1999; Wills & La Rovere, 2010). Conventional vehicles used combustion engines in which energy generated by burning mixture of air and fuel. The gas emissions from ICE vehicles consist of hydrocarbons (HC), carbon monoxide (CO), Sulphur oxide (SO_x), nitrogen oxide (NO_x), and soot, which is also considered the significant matter. Fossil fuels used by the conventional vehicle contribute heavily towards air pollution and are not a renewable source of energy (Rezvani et al., 2015). Continuously rising energy security transport emission concerns have placed the world under immense pressure to move towards a sustainable transport system (Habich-Sobieggalla et al., 2019). That is why automotive industries are investing a lot in technology improvements to reduce carbon emissions advance fuel efficiency, maintain the level of performance, reliability, security, and other maintenance attributes (Zhang et al., 2016). The innovative technology in the automotive sector has surprised the world. Automotive industries find themselves engulfed in the battle of hybrid electric vehicles, plugin hybrid electric vehicles, and battery electric vehicles. Most people just know the name of electric vehicles, but they are not fully aware and cannot differentiate between the different types of electric vehicles.

And yet, the distinction between hybrid and plugin hybrid is still blurred. As hybrid vehicles are a mix of two worlds that is electric motors and internal combustion engines. Hybrid vehicles are generally split into two types that are the hybrid electric vehicle (HEVs) and plugin hybrid electric vehicles (PHEVs). HEVs, regardless of their division, mostly grows their power from internal combustion engines. As required, an extra power boost can be obtained from the electric motor, and the power needed to charge an electric vehicle is produced by regenerative braking and stored in the battery. The electric motor acts as a generator that converts the energy from the regenerative braking system and stores it in the battery. Advanced HEVs allow the vehicle to move on the electric motor alone while driving at low speed. Hybrids vehicles having combustion engines are very efficient in fuel consumption as compared to internal combustion engine vehicles. Large-scale adoption of PHEVs can provide an opportunity to reduce the GHG emission substantially arising from the transport sector (Orlov & Kallbekken, 2019).

PHEVs work the same as HEVs, having an electric motor and internal combustion engines also fitted in the vehicles. This type of hybrid vehicle gets the primary source of power from an electric motor, while the conventional engine act as a

backup. PHEVs need a charging outlet to fully charged their battery, as the electric battery gets low, the conventional engine steps in and takes over the engine. When the battery of PHEVs is depleted, these vehicles start acting like hybrid vehicles, where the combustion engine is the primary source of power. Hybrid vehicles have a gasoline engine the same as conventional cars, however, the hybrid engine used advanced technologies and is comparatively smaller, which reduces the emissions. Generally, the PHEVs are more energy efficient three times than HEVs. The Malaysian government is very effective and gives special considerations to the development and advancement of EVs/ PHEVs in the 11th Malaysian Plan. And Malaysian 12th Plan revolves around three dimensions: environmental sustainability, economic empowerment, and social re-engineering. To make an eco-friendly environment, adopting the green and latest technology effectively mitigates climate change. The government has also announced to invest 100RMB in the development and improvement of technologies in 25 years of planning (Zhang et al., 2010; Sang & Bekhet, 2015). The electric vehicle is very effective in reducing GHG emissions from the transport sector. Although the government may well support the PHEVs usage as a sustainable vehicle, less information is provided by the social perspective about EVs. That is why the acceptance of EVs is very limited. This study suggests promoting the PHEVs as an environmentally friendly vehicle, which will reduce carbon emission and are fuel efficient and will save a lot of money annually. Consumers' exposure to PHEVs in Malaysia is very limited that is why consumer adoption of PHEVs is very restricted. The successful diffusion of new technology is the most powerful tool and is dependent on worldwide communal acceptance. The objective of the study is to identify the PHEVs factors which can help to motivate and encourage the consumers so that they can purchase the PHEVs, the maximum purchase of PHEVs can help the government to reduce the level of carbon emission in pursuing the Greentech Mater Plan 2030 and Carbon Neutral Nation 2050 target.

This chapter is organized as follows, initiating a literature review explaining PHEVs and variables, i.e. motivational factors explorations. The following segment proposed the conceptual model and theory applied. The section proceeds with a description of the methodology used, including implications and conclusion and future avenues discussed in the last section.

2 Literature Review

2.1 Performance of Hybrid Vehicles

Hybrid vehicles use a gasoline engine which is much smaller than combustion engines and is more fuel efficient. Most vehicles need a big engine to produce power and have quick acceleration. And smaller engines' fuel efficiency can be improved by having smaller parts and a reduced number of cylinders. Some of the reasons for being smaller engines more efficient as compared to bigger ones:

- The bigger engine will be heavier and need more power to accelerate.
- Internal components and pistons will be heavier and will require more energy for the cylinder to shift up and down.
- The movement of cylinders is bigger, so it required more fuel for each cylinder.
- Bigger engines usually have extra cylinders that required fuel when the engine is turned on and even not moving.

This shows that vehicles having the same model with a different engine will have different fuel consumption. However, the hybrid vehicle uses a smaller engine, and when it needs more power, it shifts towards electric motors. Besides having a smaller engine and being fuel efficient, a hybrid vehicle has many other features to reduce gas consumption like lighter materials, aerodynamics, irregular shutdown of engines. PHEVs can reduce GHG emissions up to 30–50% and improve fuel efficiency by 40–60% compared to ICE vehicles (Church, 2016; Parshall et al., 2010; Shuai et al., 2014). According to Khooban et al. (2016), PHEVs use less fuel and cost less gasoline, using and driving PHEVs can save a big amount of gasoline dollars in a year, which can be helpful for environmental sustainability. Previous studies mentioned that consumers are more concerned about the battery and range anxiety of BEVs, as PHEVs can be very effective for long routes. It can also be switched to a combustion engine when the battery is depleted.

Emission of these ICE vehicles can be divided into two main categories, i.e. air impurities contribute to haze, smog, and health problems; and the other greenhouse gases (GHG) are methane and carbon dioxide. Both types of emissions depend on vehicle type. ICE vehicles produce emissions directly through the tailpipe that evaporates from the vehicles' fuel process. PHEVs produce zero tailpipe emission on electric mode but produce evaporative emissions while on ICE engines. Conversely, BEVs emit zero tailpipe emissions. The direct emission of ICE vehicles is hazardous as compare to evaporative emissions from PHEVs (Energy, 2018). While in the case of extracting and refining the gasoline from the earth, GHG emissions are also produced. Electric power while charging the battery vehicles also emit carbon however, the emission ratio during this is very low (Energy, 2018).

2.2 CO₂ Emission Ratio by Plugin Hybrid and Conventional Vehicles

Kato et al. (2012) conducted a study on the combustion engine and electric vehicle's carbon emission and fuel efficiency ratio. Thirty-five PHEVs and 35 conventional vehicles travelled the 197,826 km distance in 5 months, the gasoline consumption was reduced up to 44% on PHEVs, and additionally, 567 kWh electric power was consumed. And greenhouse gases and carbon emissions were reduced by 17% as compared to combustion engines. The combustion engine travelled a 197,826 km distance in 5 months; it consumed 8608 litres of gasoline and emitted 19,971 kg of carbon. As compared to the electric vehicles, PHEVs travelled a distance of

85,302 km, consumed power 12,567 kWh, and emitted 5241 kg of carbon. In contrast, HEVs travelled 112,792 km distance, consumed 4858 litres of gasoline, and emitted 11,271 kg of carbon. It can be analyzed that electric vehicles have a low carbon emission ratio compared to conventional vehicles.

Carbon emission of the electric vehicle was reduced by 1–44%, the longer the distance travelled, the lesser rate of carbon emission. The carbon emission ratio of PHEVs was very low, as compared to HEVs and conventional vehicles. Carbon emission was reduced by 17% while using electric vehicles. The study showed that the usage of EVs effectively reduces greenhouse gas emissions, and maximum diffusion of PHEVs can be helpful to reduce carbon emissions. PHEVs’ consumer complexity of range anxiety can also be addressed, as it can use both source’s gasoline and electric power to run.

2.3 Motivational Factors

Motivational factors are to enhance the consumer adoption intentions towards the maximum purchase of PHEVs. Different factors have been discussed in detail below, and Fig. 1 shows the relationship between motivational factors and consumer adoption intention, social media has been used as moderation to strengthen the relationship between the motivators and consumer adoption intentions.

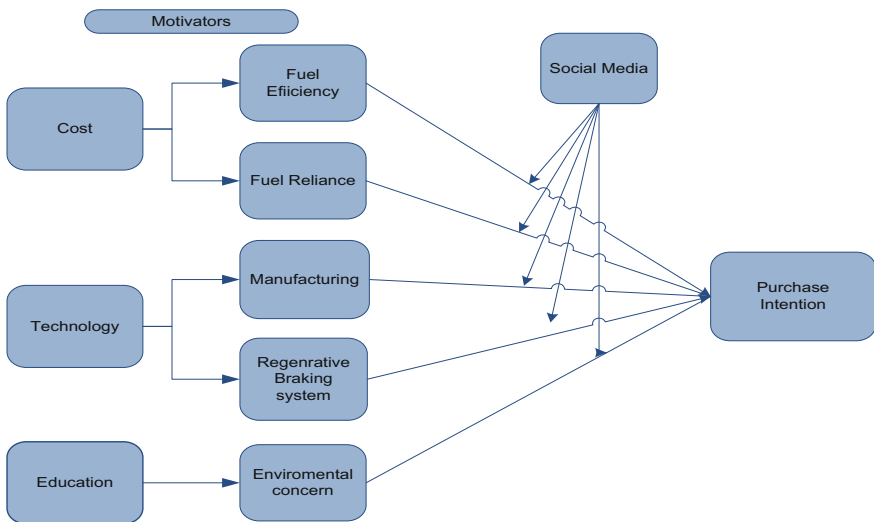


Fig. 1 Conceptual Model. Source: Developed by the authors

2.3.1 Costs

Electric vehicle battery cost is considered an incremental cost as compared to conventional vehicles in the world. PHEVs have the advantage of being equipped with a smaller battery as compared to BEVs (Battery Electric Vehicles). As plug-in, Toyota's Prius comes with a 5.2-kWh battery, smaller than the full battery Nissan Leaf's battery 24 kWh, and the Volt Chevy has a battery of 16 kWh. PHEVs incurred the other costs that BEVs do not have, like the combustion engine that is sufficiently high as battery cost. And the main difference is the BEVs are offered at a very high upfront cost as compared to PHEVs. The cost of PHEVs is comparatively high than ICE vehicles, however, the annual maintenance and fuel cost of PHEVs is comparatively very low. The purchase cost of PHEVs is not considered a key factor in developing purchase intentions (Habich-Sobiegalia et al., 2019), these vehicles are fuel efficient, consume less fuel, and emit less carbon, which can motivate consumers.

Fuel Efficiency

PHEVs are fuel efficient and consume low fuel as compared to ICE vehicles. The fuel efficiency of PHEVs is very effective to motivate consumers to buy PHEVs (Ozaki & Sevastyanova, 2011). Higher fuel and gasoline prices save the fuel cost for PHEVs as compared to ICE vehicles (Al-Alawi & Bradley, 2013; Prud'homme & Koning, 2012; Tseng et al., 2013; Wu et al., 2014). Consumers are more conscious about the fuel efficiency of vehicles and PHEVs are fuel efficient, which can be helpful to motivate the consumer to purchase EVs. According to Barla et al. (2009), Sorrell et al. (2009), Steg et al. (2005), effective tax rebate policies and fuel efficiency strategies of PHEVs have influenced consumer intentions positively. To attain the Malaysian government Green Procurement Plan 2016–2020, reducing the carbon emission by 40% until 2020 can be possible by maximum usage of EVs.

Fuel Reliance

EVs are evolving answer of gasoline vehicles' fuel reliance, their emerging carbon emissions, and environment-friendly concerns (Al-Alawi & Bradley, 2013; Dijk et al., 2013). ICE vehicles emit carbon and GHG emissions, which degrades the environment. EVs appear to be effective to reduce carbon emission and gasoline dependency. PHEVs have reduced fuel reliance on vehicles, as they can run on electric batteries also. The consumer trust in PHEVs will reduce the reliance on gasoline, as having an electric battery can recharge at any charging outlet (Barbarossa et al., 2015; Bateman et al., 2013). The reliance of fuel station depends on when the electric vehicle charging infrastructures are limited and a faraway, PHEVs provides its users more freedom and flexibility to go far away. This new

vehicle is getting worldwide acceptance that could transform the technology and be a big rival in the existing automobile markets.

2.3.2 Technology

Technology itself is the name of innovation, where something new is being adopted to upgrade the existing technology. “Innovative products are desire to look out for something novel and unique” (Hirschman, 1980). Rogers (2003), identified that technology innovativeness is where consumers adopt the new technology products earlier than anyone in society. According to Biswas and Roy (2015), Im et al. (2003), Tanner and Wölfing Kast (2003), innovation-seeking consumers are influenced by the new product adoption. PHEVs is an innovative technology in the vehicle, where it runs on electric battery and gasoline. PHEVs as an innovative technology, can be recharged at the home, office, or any charging outlet. Home charging is very effective and encouraging for the consumer to recharge their vehicles anytime without any resistance. Installing the home charging outlet at home with additional fast charging and timer features is innovative technology (Hall & Lutsey, 2017). These features can be strong enough to encourage consumers towards the purchase of PHEVs.

Manufacturing

Established car companies looking for different multiplatform technology strategies that notably offer a wide range of HEVs, PHEVs, and BEVs, recently two well-known auto manufacture brands offer PHEVs Opel and Chevrolet. Battery-powered vehicle manufacturing is an important segment for automotive manufacturers nowadays (Hawkins et al., 2013). Almost all manufacturers demonstrate their interest in developing EVs and passenger vehicles (Lieven et al., 2011). The Malaysian government also considers the manufacturing and innovation in EVs in the 11th five-year Plan. The government also planned to improve the technologies and invest RM 100billion in 25 year-long Plan (Sang & Bekhet, 2015; Zhang et al., 2010). However, independent auto companies mostly focus on developing EVs. Autonomous car manufacturers are not strictly path-dependent and can find it easier to mould their strategy towards market demand. Manufacturing of these vehicles is comparatively easy than ICE vehicles, the maximum availability and awareness can encourage the consumer to purchase EVs.

Regenerative Braking System

PHEVs regenerative braking system enables the kinetic energy of the vehicle to convert back into electrical energy while the pedal braking, this braking electrical energy is reserved in different storage devices like batteries, and ultracapacitors

(Chau, 2014). PHEVs are generally equipped with the hybrid regenerative hydraulic braking system when the regenerative braking force is insufficient to provide the same ratio available in ICE, the hybrid regenerative hydraulic braking system applied (Chau, 2014). In conventional vehicles, when decelerates, the vehicle's kinetic energy is lost by braking friction, as the brake pads interact with rotors. And in EVs pressing the brake pedals alert the electric motor to operate in reverse and slow down the wheels, at the same time vehicle revokes the energy and delivers it to the battery (Doyle & Muneer, 2017). Regenerative braking for electric vehicles extends the mileage range (Hartley et al., 2011). This braking system for PHEVs enables the mileage range to be extended, however, experience specified that braking benefits are always not the same as expected because of power conversion inefficiencies (Hartley et al., 2011). This is quite effective to encourage individuals to purchase PHEVs.

2.3.3 Education

Education enlightens the human consciousness towards environment degradation and cleanliness. According to Carley et al. (2013), low-level education leads towards negativity and reduces the individuals' purchase interest. PHEVs being sustainable a vehicle is helpful to reduce the GHG emission levels and upgraded technology, which consists of additional features low noise, eco-friendly, low fuel dependency etc. Carley et al. (2013) identified that highly educated individuals would be more sensitive towards environmental degradation. Education encourages individuals' perception of being eco-friendly and adopting sustainable vehicles. As awareness and education about new technology vehicles will be helpful to enhance consumer behaviour towards PHEVs adoption. Sovacool et al. (2018) acknowledged that individuals who have higher education would give them more awareness of environmental protection and try to minimize the energy sources. By having more education and awareness by social media, consumers can be effective in encouraging PHEVs to reduce carbon and GHG emissions.

Environmental Concern

Razak et al. (2014) stated that individuals' awareness about environmental issues and earth ecology can significantly affect consumer purchase intentions. Balderjahn (1988), Ellen et al. (1991), Martin et al. (2009), Roberts and Bacon (1997) suggested that energy protection, compassion about environmental change, and clean energy are the dimensions of environmental concerns. Environmental concern is a prominent predictor of consumer purchase intentions towards PHEVs, significantly affecting the sustainable product (Sabrina Habich Sobiegallaa, December 2018). Individuals having environmental considerations will be more eager to purchase PHEVs, as this vehicle is helpful to reduce carbon emissions and preserve the environment (Mourato et al., 2004; O'Garra et al., 2007).

2.3.4 Social Media

Social media is being an accepted platform to conduct marketing activities worldwide. Social media is gradually finding its place in all aspects of life. Today consumers are more engaged with social media major platforms such as Facebook, YouTube, Twitter, Google+, WhatsApp etc. (Alalwan et al., 2017; Kapoor et al., 2018; Shareef et al., 2019; Kim & Kim, 2018). Social media platforms change the nature of interactions with our family, friends, or organizations. Indeed, these platforms signify a new place where people and organizations can socially, commercially, educationally, and politically interact and exchange information about products and services with each other (Hawkins & Vel, 2013; Rathore et al., 2016; Usher et al., 2014; Zeng & Gerritsen, 2014; Zhu & Chen, 2015). Social media platforms are being used worldwide by organizations to build a profitable relationship with the customers (Alalwan et al., 2017; Braojos-Gomez et al., 2015; Kamboj et al., 2018; Lin & Kim, 2016; Oh et al., 2018). Alalwan et al. (2017), identified diverse marketing practices that could be applied on social media platforms, i.e. e-Word of mouth (WOM), advertising, branding, and consumer relationship management. Social media can be a powerful tool to encourage consumers towards PHEVs, as consumers usually are unaware of the features of vehicles. Social media has been mainly reported as a peoples' place for fun and enjoyment (Alalwan et al., 2017; Lee et al., 2013; Shareef et al., 2019; Wamba et al., 2017). Consumers are found more attractive towards the advertisement due to their level of attractiveness and creativity (Dwivedi et al., 2019; Lee et al., 2013; Jung et al., 2016; Lee & Hong, 2016; Wamba et al., 2017). With the help of a social media platform, consumer awareness can be enhanced towards using PHEVs, by maximizing the usage of PHEVs, sustainable development goals of reducing carbon emission can be achieved. Social media in Fig. 1 has been identified as a moderating variable that can enhance consumer adoption intentions. Social media can be very effective marketing tool to aware consumers, because it has been realized that worldwide more than half of the people almost 51% on Earth are active users of social media (Insights, 2020), however, in Malaysia, almost 81% population is active social media users and that is still growing (Statista, 2020).

2.3.5 Innovation Diffusion Theory

Rogers (1962) defined the diffusion of innovation as a process in which individuals make and share information with others through communication. A diverse social system has different values and beliefs, which will contribute to and influence the benefits and costs of innovations. Rogers (1962) categorized the population into five classes of adoption process: innovators, early adopters, early majority, late majority, and the last laggards. "Innovators" basically are a small group of well-educated and risk-loving individuals who welcome new ideas. "Early adopters" are so-called opinion leaders, who disseminate the information towards larger social groups.

Both groups have great concern for environmental issues. Once the information is received from the co-workers the “early” and “late majority” individuals take time in decision making. And in the last “laggards” are in risk-averse behaviour with low financial resources, limited social interactions, and a slow decision-making process.

The social system has different values and beliefs towards innovation that will influence the benefits and costs of innovations. Innovation can be adopted in sequence and their actors of adoption can be identified at the time of adoption. The communication system is the basic element of the diffusion process that is related to EV’s qualities and characteristics. For the innovative technology diffusion into the whole society, social networks have great importance in this context. Innovation and other technologies when compared to the alternatives, the advantage of new technology is a crucial factor in influencing its adoption among consumers based on its social status and market price. Consumers are more concerned about environmental problems if motivation and awareness regarding the adoption of diffusion of EVs in terms of environmental issues will be effective.

“According to Rogers Everett (1983), the invention is novel practice for an idea or an object related to a product’s adoption”, and diffusion relates to the procedure in a society by which an invention and discovery are transferred via specific methods (Lee et al., 2013). Rogers Everett (1983) has defined the five constructs contributing factors for technology diffusion: compatibility, observability, trialability, complexity, and absolute advantage. Absolute advantage relates to the technology considered superior over other alternatives (Mauro et al., 2007). Compatibility signifies the technology extent to meet adopter’s existing needs, values, and prior experiences (Lee et al., 2013). Complexity denotes to the adopters being user friendly and sophisticated towards innovation (Lee et al., 2013). Trialability signifies the technology extent to which it can be verified on a restricted basis (Lee et al., 2013). And finally, observability denotes the degree of qualities and advantages of technology visible to possible adopters (Mauro et al., 2007). These features mentioned above define end-user acceptance of technology and the decision-making process (Lee et al., 2013). The conventional vehicles are in the maturity level of adoption intention, which is very difficult to modify. On the other side, electric vehicles are innovative technology. In the initial stage of adoption, this innovative technology to be successful needs worldwide awareness and acceptance.

3 Methodology

The methodology of this chapter is based on secondary literature sources related to motivation and transport carbon emission. To accomplish the source of the study, several bibliographic databases were used, such as Google Scholar, Science Direct, and Web of Science to search keywords like “PHEVs, environment, sustainability, carbon emission, transport, motivation,” published in the year (i.e. 1997–2020). Many publications were identified, including reports, papers, and other literature, in which reports, book chapters, and manuscripts unpublished were excluded.

Studies with basic and relevant information missing were also excluded. Publications among the years (1997–2020) were included, considering the manuscript, title, and/or abstract. Most of the research papers used primary data except few used secondary data. The study's conceptual framework is thoroughly based on the secondary data that combined the incoherent frameworks proposed by different authors into a single study. Previous studies proposed different types of issues and aspects related to consumer purchase of electric vehicles, barriers in electric vehicle adoption in a scattered manner. For example, Hong et al. (2013) identified three factors that enhance consumer adoption: attitude, subjective norm, and behavioural control. Schuitema et al. (2013) highlighted the hedonic attributes: the eagerness of technology usage, driving pleasure, and environmental uniqueness regarding electric vehicles. Krause et al. (2016) purchase cost and cost fuel savings are the discrete choices in electric vehicle adoption. And Wang et al. (2016) environmental concern and cost are based on the personal moral norm related to Hybrid Electric Vehicles. All these factors are interrelated and need to be integrated into a single framework to motivate the consumer towards the purchase of Plugin Hybrid Electric Vehicles. This study indeed closes the existing literature gap and body of knowledge.

4 Implications

The implication of the social media concept through advertisement is recommended to enhance consumer awareness and motivation towards sustainable EV. Using social media to aware of these vehicles' sustainability prospects will encourage consumers to think about this vehicle. Consumers are mostly found unaware of EVs and finding it slightly challenging to adapt to them. Worldwide organizations are more concerned about the limited adoption of EVs, and purchases can be enhanced by regulating effective marketing and awareness strategies. The government and industries can support the social media campaigns and strategies, and incentives on the purchase of an electric vehicle to enhance consumer motivations. If the consumers are not more concerned about the environment sustainable policy, no number of summits and organizations can save the planet (VanDeveer, 2003). Furthermore, the findings provide a much-needed approach to deal with the limited adoption of PHEV. The factors discussed in the study can be used to motivate the consumer to purchase these vehicles.

Based on the study model, five routes linked in the study are related to PHEVs different features that involve fuel efficiency, and fuel reliance of PHEVs can motivate consumers. Mostly consumer is unaware of the prospect of fuel efficiency as compared to combustion engine vehicles. Technology related factors includes manufacturing and regenerative braking system, that is also efficient to encourage consumer. A regenerative braking system is a new feature in these vehicles, running the engine for a limited time without using fuel. And in last environmental prospect of the vehicle, consumers can be eco-friendly and use environmentally safe products in the long run. With the help of social media, the consumer can be informed and

motivated about these features. As in Malaysia, the transport sector contributes 27% of carbon emission, and these vehicles can contribute a lot to reduce gases.

5 Conclusion

The findings provide a much-needed approach to deal with the limited adoption of EV. Although the PHEVs are widely available in the market, the demand for these vehicles is limited because consumers are unaware of these vehicles' features. The acceptance of the vehicle needs worldwide acceptance to meet the sustainable development goal of reducing carbon emission. A consumer purchase of EVs is not very effective worldwide, especially in Malaysia, that is why the transport emission contributes a lot towards greenhouse gases. Previous studies suggested that consumers are more concerned about the range of EVs and do not prefer to buy EVs. However, PHEVs can operate on two systems that are: electric batteries and internal combustion engines. This vehicle can also be used for long routes because if the battery charging of the vehicle depletes in the midway, it can be shifted to the combustion engine and can continue its journey without any resistance. This study proposed the motivational factors that can encourage consumers to purchase EVs to reduce carbon emissions. With the help of a social media platform, consumer motivation can be enhanced towards PHEVs by introducing eco-marketing strategies. Consumer awareness about PHEVs features could effectively reduce transport carbon emission, as it is the second biggest carbon emission contributor worldwide. In Malaysia, the transport sector is the second-largest carbon emitter after industries. To reduce the transport carbon emission and achieve the Malaysian Green technology Master Plan 2030, maximum usage of PHEVs and BEVs can be effective, which is possible by making consumers aware by the social media platform. This proposed conceptual model has shown a significant relationship among the variables towards consumer adoption intentions of PHEVs. It opens a path for future researchers to prove the hypothetical relationship among these variables empirically. And this study only focused on the PHEVs in the upcoming years' consumer attitude towards hydrogen powered and fuel cell vehicles can be more interesting research in this domain. New factors related to PHEVs have been proposed, i.e. fuel efficiency, fuel reliance, regenerative braking system, and social media have been introduced in this study. With the help of social media, consumer motivation will be encouraged to adopt the PHEVs.

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Religion in Consumer Behavior Research: A Systematic Literature Review



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Abstract The aim of this paper is to systematically examine how religion is reflected in scholarly articles regarding consumer behavior research over the year 2010–2019. A total of 36 academic articles was content analyzed to show marketing scholars' findings of religion as a moderating variable in consumer research. Three main groups were identified in which interest in religion increased significantly: Religion, Religiosity and Purchase Behavior, Religion and Consumer Ethics and Religion and Sustainable Consumption. Evidence suggests that religion, in most cases, influences consumption in specific contexts. Most of the articles analyzed on Religion, Religiosity and Purchase Behavior show an influence on the relationship between religion, religiosity, and purchasing behavior. The results of the analyzed articles on Religion and Consumer Ethics showed that the influential relationship between religion and consumer ethics is questionable. Most articles have revealed that religion has a dual effect on consumer ethics, depending on the internal and external religiosity of consumers. Most of the observed articles on Religion and Sustainable Consumption have shown that religion influences sustainable consumption. In general, religion and religiosity have been found to influence purchasing behavior as well as consumer ethics and sustainable consumption.

Keywords religion · religiosity · consumer behavior · purchase behavior · consumer ethics · sustainable consumption

1 Introduction

Religion in its cultural context is treated as an integrated system of beliefs and practices that encompasses the fabric of societal values (Mansori, 2012). Religion is a hereditary and enduring value of humanity, affecting various spheres of life. As a

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cultural element, religion influences consumer attitudes towards market products and brands (Madni et al., 2016). According to the study of Abdeltawab and Obaidalaha (2020), the ethical concerns in purchases are influenced more by the cultural factor and not a religious factor. However, religions also impact consumption behavior as they dictate certain values and rules. Religious consumers are more obedient to the rules and dogmas imposed by one religion. It is problematic to determine whether consumers attribute certain behavior to religious attitudes or whether their choices are influenced by religion (Gauthier et al., 2011). Research on the influence of religion on consumption behavior is often controversial. Religious attitudes have been shown to help consumers overcome the ethical challenges, tensions, and costs under the control of the market. In recent years, there has been a growing body of research on the relationship between religion and consumer behavior, so it is important to consider changes in this and discuss future research directions.

The purpose of the article is to systematically examine how religion is reflected in scholarly articles regarding consumption research over the year 2010–2019. A systematic literature review on religion and consumer behavior is conducted. This review of research follows a systematic approach: the evaluation problem and research criteria are indicated, the literature search is performed, the research evidence is systematized and interpreted, the conclusions are presented. To overview the direction in which studies link religion to consumption research, this article carries out a systematic analysis of scientific papers based on the keywords of religion, religiosity, and consumer behavior. The article is exploratory in nature, and it aims to provide an overview of how religion is analyzed in the context of consumption research in recent years in the scientific literature.

The present study will contribute to a deeper understanding of the role of religion in shaping consumer behavior by identifying the main research trends in this domain and revealing the possible relations between the constructs. An enhanced understanding of underlying fundamental consumer values and consequent behavior patterns could suggest specific practices for promoting sustainable consumption behavior. The main part of the article consists of a section on Religion in Consumption Research, which is divided into three subsections: Religion, Religiosity and Purchase Behavior, Religion and Consumer Ethics and Religion and Sustainable Consumption. The summarizing conclusions are given at the end of the article.

2 Religion in Consumption Research

Because the secular meaning of life and its perspectives are uncertain, people relate their lives to a religious context, seeking meaning in it (Pişkin, 2016). Religion has no power to set norms for every aspect of life because the human mind is exposed to consumption information daily. Consumption expresses decisions based on perceptions of values and prevailing opinions and practices. Consumers who practice religion cannot escape the patterns of thought and behavior of consumerism. Religion is one of the most universal and influential social institutions that have a

profound impact on people's beliefs, personal identities, and value systems (McMinn et al., 2009). It is a factor affecting every segment of society, describing human's life in its perfect form, shaping its moral, social, and ethical structure, based on governmental provisions, affecting the social distribution and individual social institutions, defining the duties, roles, and responsibilities of each individual in society (Mokhlis, 2010).

Over the year 2010–2019, there has been a growing interest in religion in consumption research. A systematic review of articles published between 2010 and 2019 was conducted using the Web of Science database. Search terms included religion, religiosity, consumer behavior, purchase behavior, consumer ethics, and sustainable consumption. Three major groups were distinguished, where interest in religion was growing significantly—Religion, Religiosity and Purchase Behavior, Religion and Consumer Ethics and Religion and Sustainable Consumption. Total 36 articles regarding religion in consumption research were investigated. It is noticeable that most articles (20 articles—57%) are published on Religion, Religiosity and Purchase Behavior. Relatively fewer articles are published on Religion and Sustainable Consumption (9 articles—24%) and Religion and Consumer Ethics (7 articles—19%). The research directions and main conclusions will be examined in more detail in the following subsections.

2.1 Religion, Religiosity and Purchase Behavior

Main results in Religion, Religiosity and Purchase Behavior research are provided in Table 1. The findings are discussed further.

Religion and religiosity have been shown to have a noticeable influence on consumer behavior (Shin et al., 2010). Research has shown that religious Christians exhibit the most pro-environmental behavior. In the Singapore study (Kahle et al., 2016) was found that internal religious orientation is positively related to maintaining attitudes and behavior. Social conditions, personal needs, habits, selling methods, and technology play an important role in consumer decision-making. The decision to buy reflects a person's feelings and thoughts. However, there is still a lack of understanding of religious consumer buying behavior (Khaniwale, 2015). To achieve a better understanding, it is necessary to investigate personal and social factors that influence consumer behavior to implement more effective marketing and business strategies. Kalliny et al. (2018) examined whose impacts affect religiously based boycotts. Consumers are more likely to boycott when religious leaders back such a boycott.

The conceptual model developed by Al-Hyari et al. (2012) can help to investigate the relationship between religious beliefs and consumer boycotts of certain products. Research findings have shown that there is a clear and strong correlation between religiosity in Arab-Islamic collective cultures and consumer behavior (inclination to boycott). Consumers in Arab-Islamic societies are collectively influenced by religious factors in purchasing decisions, especially international brands.

Table 1 Findings of Religion, Religiosity and Purchase Behavior research

Findings	Authors
Internal religious orientation is positively related to consumer behavior	Kahle, Minton, Juan and Tambyah (2016)
Christians exhibit the most pro-environmental behavior	Shin, Park, Moon and Kim (2010)
Religion is an external factor, which influences consumer behavior	Khaniwale (2015)
Strong correlation between religiosity and consumer behavior	Al-Hyari, Alnsour, Al-Weshah and Haffar (2012)
Religion affects consumer psychology and behavior through four dimensions	Mathras, Cohen, Mandel and Mick (2014)
Significant influence of religion on the consumer's perceived risk	Baazeem (2015)
Religiosity increases the likelihood of participating in cultural events	Montoro-Pons and Cuadrado-García (2018)
Consumers are more likely to boycott when such a boycott is backed by religious leaders	Kalliny, Minton and Benmamoun (2018)
Personal religious identity influences consumer behavior and perceived religious benefit of self-expression	Butt, Rose, Wilkins and Ul Haq (2017)
Consumer religiosity and religious identity influence purchases of halal food	Mumuni, Veeck, Luqmani, Quraeshi and Kamarulzaman (2018)
Consumers' eating habits are influenced by the religious community	Garay-Quintero, Robayo-Pinzon and Rojas-Berrio (2018)
Several factors influence organic food consumption among religious consumers	Suki and Suki (2015)
Religiosity, unlike spirituality, has a significant influence on consumers' purchase	Sardana, Gupta and Sharma (2018)
Religious orientation was found to play a weaker role in consumer behavior	Abdellatif, Meddour, Saoula and Majid (2018)
Religious affiliation or independence does not have a significant impact on consumer behavior	Youngtae (2010)
Religiosity is not a decisive factor in developing a positive attitude towards luxury goods	Ashraf, Hafeez, Yaseen and Naqvi (2017)
Religious affiliation may influence consumer behavior, but differently	Mokhlis (2010)
Religiosity may be the cause of changes in consumer behavior, but religious affiliation does not	Youngtae, Paulraj and Shin (2013)
God's observation has no effect on self-control; observation of self and others has a significant effect on consumer self-control	Minton, Jeffrey, Gurel-Atay and Kahle (2018b)
Religiosity has some influence on consumers' propensity for environmental issues	Raggiotto, Mason and Moretti (2018)

Source: own work

Mathras et al. (2014) presented a concept to examine the impact of religion on consumer behavior to stimulate future research. Religion is described as a multifaceted entity that can influence consumer psychology and behavior through four dimensions—beliefs, rituals, values, and community. Each dimension of religion

was characterized by integrating research into psychology, consumer behavior, marketing, and religious literature, proposing new lines of research. Based on conceptual frameworks and empirical research, the discovered medium has asked consumer researchers to ask deeper questions about why religious affiliation and levels of religiosity can exacerbate differences in consumer behavior and uncover the psychological implications underlying religion's impact on consumer behavior. Baazeem (2015) investigated the relationship between consumer religiosity and their perceived risk in accepting new products. The results confirmed the significant influence of religion on the consumer's perceived risk and suggested why this may lead to specific consumption decisions. The strongest link was found between intrinsic religiosity and perceived psychological risk. This confirms the theoretical assumption that, in principle, religious people are more dependent on religious decisions and norms.

Multinational corporations wishing to compete in markets around the world should not underestimate the influence of religion on consumer demand (Butt et al., 2017). The purpose of the authors' study was to assess the extent to which consumer branding in the religious market is justified and how it is determined by the psychological and behavioral characteristics of consumers, regardless of product characteristics. A strong predictor of consumer behavior and perceived religious benefit of self-expression was found to be a strength of personal religious identity. Mumuni et al. (2018) examined the drivers of consumers' search efforts for halal food in a non-Muslim majority market context. It was found that consumer religiosity and religious identity are positively related to consumers' efforts to seek religiously permitted (halal) food in the US market, whereas Garay-Quintero et al. (2018) described the buying behavior of people with religious affiliations from the perspective of the symbolic consumption of food products and alcoholic beverages in Bogota. It was found that consumers' eating habits, such as fasting and alcohol and non-alcoholic beverages, were significantly influenced by religious community leader training.

An empirical study conducted in Malaysia sought to examine whether Muslim and non-Muslim consumers attach different importance to the consumption of organic food (Suki & Suki, 2015). The results showed that specific personal needs, the environmental value of organic food consumption, and governmental efforts all influence attitudes towards organic food consumption among non-Muslim consumers. Montoro-Pons and Cuadrado-Garcia (2018) observed that overall personal religiosity increases the likelihood of participating in cultural events. The intensity of a person's beliefs in a person's attachment to their religion reduces the likelihood that such a person will attend a given cultural event. Sardana et al. (2018) found that intrinsic and extrinsic religiosity, unlike spirituality, has a significant influence on consumers' intentions to pay attention to a brand based on their spirituality. The Islamic religion provides its followers with holistic guidance in all aspects of life (Ashraf et al., 2017). A study conducted in Pakistan looked at the influence Islam has on consumer decision-making. The findings of the study showed that religiosity is not a decisive factor in developing a positive attitude towards luxury goods, shaping beliefs, controlling personal behavior, following subjective

norms, and intending to purchase luxury goods. A study by Youngtae (2010) examined the relationship between consumer religiosity levels and consumption behavior. The religious connection was not found to be significantly related to consumption behavior.

Abdellatif et al. (2018), in an empirical study, revealed the results of consumer buying behavior in Tujado, Saudi Arabia. Consumer behavior problems have been found to be heterogeneous due to cultural differences. The study revealed the influence of price, motivation, the importance of cultural perception, and religious orientation on consumer buying behavior. Empirical evidence confirmed a direct relationship between price, motivation, the importance of cultural perception, and consumer buying behavior. However, religious orientation was found to play a weaker direct role in the relationship between price, motivation, the importance of cultural perception, and consumer buying behavior. Other articles have explored the impact of religion and consumer attitudes and their subsequent behavior. Minton et al. (2018a, 2018b) investigated how consumer religiosity affects observing oneself, others, and God. The study found that God's observation had no effect on self-control, and observation of self and others had a significant effect on consumer self-control. With the help of an empirical study, Mokhlis (2010) provided some insights into similarities in consumer shopping styles and differences in behavioral characteristics. Muslims and Buddhists were found to be more fashion conscious than Hindus. Hindus tend to be keener to quality consciousness. Different religious cultures can be considered as distinct consumer segments to which different marketing efforts should be directed.

Youngtae et al. (2013) looked at how religion—religious alliance and religiosity affect change in consumer behavior in Korea and the USA. Data were collected from Korea and the USA. The findings of the study suggest that religiosity, as expressed in the importance of religious beliefs in a person's life, may be the cause of changes in consumer behavior. But belonging to a religion is not the right tool to predict consumer behavior. Raggiotto et al. (2018) explored the effects of environmental predisposition on purchasing intentions and found that religiosity has some influence on consumers' propensity for environmental problems and vegan shopping habits.

In summary, most of the analyzed papers demonstrate an influence on the relationship between religion, religiosity, and purchase behavior. However, there are few that report unclear or inexistent relations.

2.2 Religion and Consumer Ethics

Table 2 shows the summarized results from the analysis of papers on Religion and Consumer Ethics topic. The findings are discussed further.

Recently, ethical business behavior has become more widespread (Ramasamy et al., 2010). Research launched in Hong Kong and Singapore has shown that Asian consumers are demanding ever greater corporate social responsibility. The purpose of the article was to examine the influence of religiosity and values on corporate

Table 2 Findings of Religion and Consumer Ethics research

Findings	Authors
Consumers who consider themselves to be religious tend to favor socially responsible business practices	Ramasamy, Yeung and Au (2010)
Ethical attitudes towards the consumer are intrinsically influenced by internal religious values	Swimberghe, Flurry and Parker (2011)
Action based on moral justice are the most effective in stimulating ethical purchase intentions among non-religious consumers	Minton, Bret and Upadhyaya (2018a)
Ethical identity is negatively associated with adapting to a global consumer culture among Muslims, but these factors are independent of one another among Christians	Cleveland, Laroche and Hallab (2012)
Internal religiosity positively influences consumer ethics, but external social religiosity negatively affects ethics	Arli and Tjiptono (2013)
Muslim consumers show a stronger relationship between religiosity and ethical behavior than Christian consumers	Schneider, Krieger and Bayraktar (2011)
Intrinsic religiosity leads to negative beliefs about unethical consumer behavior, but external religiosity leads to a positive attitude towards unethical consumer behavior	Chowdhury (2018)

Source: own work

social responsibility (CSR) support among consumers in Hong Kong and Singapore. Primary data showed an important direct link between religiosity and socially responsible businesses. In Hong Kong, such an approach is driven by both altruistic and egoistic causes. In Singapore, the cause is predominantly egocentric. Consumers who consider themselves to be religious tend to favor socially responsible business practices. Consumers are more willing to buy goods and services from socially responsible companies.

A study conducted in the US (Swimberghe et al., 2011) expanded the literature, including the subject of religion, by providing a theoretical explanation of how religion motivates consumer buying activity. The study found that consumers value the actions of sellers and formulate ethical decisions based on them. Ethical attitudes towards the consumer are intrinsically influenced by internal religious values, not by belonging to a church. It was stated that highly religious consumers could not only follow religion-embedded beliefs when deciding their behavior, but also apply the same standards to sales professionals. Minton et al. (2018a, 2018b) study was the first known study, where the relationship between religion (Western, Eastern, and atheistic), morality and justice, and ethical consumption have been investigated. In two studies covering the context of Fair-Trade products, differences in efficacy between moral and righteous claims promoting ethical consumption based on religious or non-religious affiliation has been found. Action based on moral justice has been found to be the most effective in stimulating ethical purchase intentions among Western (non-religious) consumers. Surveys explain customer buying motivations and found that non-religious and religious eastern consumers are motivated by concern for those around them, while western religious users are motivated by concern for themselves.

A comparative analysis of an empirical study conducted in Lebanon has identified cultural differences in consumption because of personal ethical identity, religiosity, individuality, and possession of different consumption values (Cleveland et al., 2012). Ethical identity is negatively associated with adapting to a global consumer culture among Muslims, but these factors are independent of one another among Christians. Christians and Muslims, in general, have a positive relationship between religiosity and consumer self-identification with ethical identity and materialism and adaptation to a global consumer culture.

Various studies on the influence of religiosity on consumption ethics have yielded significant results and provided ideas for further exploring this factor (Arli & Tjiptono, 2013). The purpose of the study was to examine the effect of religiousness, materialism, and long-term orientation on consumer ethics. The results of an empirical study conducted in Indonesia showed that internal religiosity positively influences consumer ethics, and external social religiosity negatively affects ethics. Previous research on this influence has been limited to the context of Christian culture (Schneider et al., 2011). The authors included Christian consumers from Germany and Muslim consumers from Turkey in a comparative study. The results showed that Turkish Muslim consumers show a stronger relationship between religiosity and ethical behavior than Christian consumers in Germany. Chowdhury's (2018) study explored the roles of inner religiosity, the quest for religiosity, and personal moral philosophy as sources of consumer ethical beliefs. Intrinsic religiosity and the pursuit of religiosity lead to negative beliefs about unethical consumer behavior. External religiosity also leads to a positive attitude towards unethical consumer behavior, which is influenced by religiosity.

The results of the analyzed articles showed that the influential relationship between religion and consumer ethics is questionable. Most of the articles revealed that religion has a dual effect on consumer ethics, depending on the intrinsic and external religiosity of consumers.

2.3 Religion and Sustainable Consumption

The main results in Religion and Sustainable Consumption research are put in Table 3. The findings are discussed further.

Religion as a psychological construct helps to understand consumption behavior as it has a significant impact on the consumer's fundamental values (Minton & Kahle, 2014). The purpose of the book was to review the relation between religion and behavioral economics. Consumers who have a high degree of religiosity are more materialistic, advocate for sustainable consumption, and are more likely to volunteer than consumers who have a low level of religiosity (Juan et al., 2016). The purpose of the article was to explore religion's influence on consumption behavior, with a focus on addressing four criticisms. More religious consumers are more inclined towards sustainable behavior and environmentally friendly attitudes. In a

Table 3 Findings of Religion and Sustainable Consumption research

Findings	Authors
Religion as a psychological construct impacts sustainable consumption behavior through consumer's fundamental values	Minton and Kahle (2014)
Religious values have a positive effect on sustainable consumption	Ghazali, Mutum and Ariswibowo (2018)
Religion affiliation is a factor in the propensity for sustainable consumption	Hwang (2018)
Religiosity impacts materialism among consumers but advocate for sustainable consumption	Jiuan, Minton and Kahle (2016)
The impact of religiosity on sustainable consumption varies from country to country	Essoo and Dibb (2010)
Religion does indeed promote sustainable consumer behavior, albeit to a small extent	Pepper, Jackson and Uzzell (2011)
Sustainable consumption can be equally impacted by both theistic and non-theistic beliefs about identity	Roshani and Rathnasiri (2018)
Personal religious commitments do not affect sustainable behavior	Martin and Bateman (2014)
Religiosity negatively affects innovation in sustainable consumption	Mansori (2012)

Source: Own work

market dominated by Islam, religion plays an important role in influencing consumer behavior and lifestyle.

In a study of Muslim consumers from Indonesia and Malaysia, Ghazali et al. (2018) examined the relationships between religious values, green habit, and green purchase behaviors via a holistic approach based on the Theory of Reasoned Action and Cognitive Hierarchy model. It was found that religious values have a positive effect on environmental concerns, attitudes toward the purchase of organic goods, and the intention to purchase organic goods. A study by Hwang (2018) explored the relationship between religion and pro-environmental consumption in terms of the consumers' willingness to pay premium prices and additional taxes and lower their living standards in South Korea. According to the Korean General Social Survey, the authors found that Christian respondents show a stronger propensity for eco-friendly behavior than Buddhist respondents.

However, the strength of religiosity varies from country to country or even within the same country and can therefore have a different impact on consumer behavior (Essoo & Dibb, 2010). It is noticeable that different religions shape consumer behavior based on values and social status. Weak positive relationships have been observed between common expressions of religion (religiosity, spirituality, religious worship and individual Christian identity) and consumer behavior, indicating that religion does indeed promote sustainable consumer behavior, albeit to a small extent (Pepper et al., 2011). Roshani and Rathnasiri (2018) explored how transcendence of identity, a common doctrinal ethical tenet of religiosity, relates to nature concerns among consumers. It was found that consumer caring for nature can be understood through the general ethical principle of the doctrine, which is based on both theistic and non-theistic beliefs about identity.

Launching a new product is one way to create a sustainable competitive advantage (Mansori, 2012). A study conducted in Malaysia tested the impact of religiosity on innovation to explore the differences between devoted and casual followers of religions. The relationship between religion and innovation was also explored. The results showed that religiosity negatively affects innovation. Buddhists have been shown to have a significantly lower propensity to innovate compared to Muslims, Christians, and Hindus. A study by Martin and Bateman (2014), conducted in the USA, examined the overall influence of religiosity on environmental-oriented consumer attitudes and behavior. Consumers tend to have personal religious preferences that they use to shape their own environmental and sustainable consumption views. The study concluded that the environment-oriented approach had little to do with environmentally friendly behavior.

Most of the articles observed have shown that religion influences sustainable consumption. A few articles revealed that religion has a low or none impact on sustainable consumption.

3 Conclusion

This systematic analysis was conducted to reveal how the concept of religion is operationalized in scientific articles to analyze consumer behavior. Data suggest that religion, in most cases, has a significant impact on consumer behavior. Religion and religiosity were found to have the greatest influence on purchasing behavior and, to a lesser extent, on consumer ethics and sustainable consumption.

Other factors that lie between the religious context and consumer behavior are not sufficiently analyzed since religious attitudes may not affect the consumer's behavior directly but through his or her beliefs and values, which can be determined by religion. Ways of directing consumers in the right direction, through an understanding of how religion affects consumer behavior, can help to create a closer relationship between religion, consumer behavior and public attitudes to achieve goals of common interest. Understanding how religion affects consumers' consciousness is a way that public authorities and public relations can use to translate target messages and affect consumer behavior, not only in the context of purchasing choice, but also in other areas of environmental and societal importance.

This research has limitations related to the methodology used. First, the search for literature can be expanded to more databases and journals. Second, the larger number of articles can be used for future research, as well as more keywords, including religious values, moral identity, purchase behavior and sustainable consumption. Third, despite the precautions, the subjectivity in classifying the articles should be acknowledged.

Analysis of scientific papers in our research revealed several possible directions for further research. It might be interesting to analyze the relationship between religiosity and other intrinsic values of individuals, e.g., moral identity, or to look for other possible motivational factors, which may play a mediator role between

religiosity and behavior. Since most of analyzed articles were based on single country or single religion affiliation research results, it would be useful to look for cross-cultural and multi-religion dimensions while exploring the topic of religion in consumer behavior research.

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Linking Banking Service Quality to Customer Loyalty: Two Levels Perspective



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Abstract The present paper analyzes service quality, customer satisfaction, and customer loyalty in the retail banking context in North Macedonia, emphasizing the two levels perspective of customer loyalty, i.e. at bank and at employee level. A survey on a sample of 786 respondents was performed and further structural equation modeling was conducted. In the research model service quality dimensions and customer satisfaction were analyzed as crucial antecedents of customer loyalty on both levels (loyalty to bank and loyalty to employees). Additionally, customer satisfaction was analyzed as a mediator in the relationship between service quality dimensions and customer loyalty. The results revealed that loyalty to employee is significantly determined by intangibles, followed by pricing, both mediated by customer satisfaction. Loyalty to bank is directly influenced by tangibles, while only indirectly affected by intangibles and pricing through customer satisfaction. At the same time, customer satisfaction is a significant predictor of both types of loyalty, additionally mediating the relationship between loyalty to employees and loyalty to bank. The present study contributes to the research corpus in this area by providing more comprehensive understanding of customer loyalty and its antecedents. The two levels perspective of customer loyalty adds further to the value of this research.

Keywords Customer satisfaction · Loyalty to employee · Loyalty to bank · Retail banking · Service quality

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1 Introduction

Contemporary marketing perspectives are increasingly focusing on relationship building aspects (Olavarría-Jaraba et al., 2018) as a feature of defensive marketing strategies. In the banking sector, the increased competition and the homogeneity of products have led banks to focus on developing strategies for customer retention and loyalty. One of the alternative strategies is to deliver high service quality (Hossain et al., 2015) which is not only the key to success (Meesala & Paul, 2018), but also a driver of company performance (Caruana, 2002; Hu et al., 2009). Although today's banking sector is characterized by continuous technological advancements, the demand for personalized services is constant (PricewaterhouseCoopers, 2020) while the service quality remains the key for differentiation and for attaining competitive advantage (Asif et al., 2016; Alam & Noor, 2020).

The satisfactory level of service quality enhances customer retention and customer loyalty in terms of reducing complaints and price sensitivity, as well as by reducing the propensity to share negative word-of-mouth communication and to shift to competitors (Zeithaml, 2000). It is considered that "it is five times more expensive to acquire a new customer than to retain an existing customer" (Zeithaml, 2000, p. 75) and therefore loyal customers are crucial asset for any company (Shankar & Jebarajakirthy, 2019). Indeed, the importance of customer loyalty lies in the fact that it is associated with the continued survival of the company and the strong future growth, especially in the face of fierce competition and market saturation. Therefore, the relevance of customer loyalty and the need to understand this concept resulted in growing research attention (Caruana, 2002; Rai & Medha, 2013; Ferreira et al., 2015; Bhat et al., 2018), mainly focused on analyzing perceived service quality and customer satisfaction as antecedents of customer loyalty (Homburg & Giering, 2001; Caruana, 2002; Makanyeza & Chikazhe, 2017; Coetzee & Coetzee, 2019). Still, there is a lack of studies researching these concepts and their relationships in the context of retail banking in developing economies, contrary to the amount of work centered in developed countries, mostly in the USA and European banking context (Paul et al., 2016). Also, there are limited studies investigating the influence of service quality on customer loyalty analyzed as both person-to-person loyalty and person-to-company loyalty (Wong & Sohal, 2003), particularly in developing context. Since customers assess bank performance, largely, on the basis of their personal contact and employee interactions (Grönroos, 1990; Hossain & Leo, 2009), investigating loyalty at employee level becomes an important topic for analysis.

This study contributes to the previous research through addressing several gaps in existing literature at once. First, customer loyalty is analyzed at two levels: person-to-company level (bank level) and person-to-person level (employee level), as well as the relationship between them. This adds to the value of this research as authors are not aware of their application in the retail banking context. Next, this study analyzes the antecedents of customer loyalty in terms of service quality as a multidimensional concept and customer satisfaction. Finally, the mediating roles

of customer satisfaction and loyalty at interpersonal level are analyzed in the relationship between service quality dimensions and loyalty at company level.

The remainder of the paper is structured as follows: In the next section theoretical background about the analyzed concepts is provided. Further, the conceptual model and the research hypotheses are presented. Then the authors explain the research method used and the results from the study are presented. In the last section a discussion of the findings is provided, given the theoretical and practical implications and the research limitations of the study.

2 Theoretical Background

2.1 Customer Loyalty

Customer loyalty is a complex concept and there is no consensus among researchers regarding its conceptualization and operationalization. In the past, customer loyalty has been equated with customer retention (Zeithaml et al., 1996). Such conceptualization does not explain the psychological aspects and reasons for customer loyalty. Often, customers continue to buy from the company not because they have strong preferences, but simply because they are inert, have high costs to change the company, or because of some other barrier to change. In this regard, Dick and Basu (1994) point out that true loyalty is based not only on the high level of repurchase, but also on the positive relative attitudes of customers regarding the affective brand rating.

Oliver (2010) offered a comprehensive definition of customer loyalty as “a strong commitment to consistently repurchase/use a preferred product/service in the future, regardless of the environmental impact and marketing efforts that create the potential for behavioral change” (p. 432). The conceptualization of loyalty as a combination of behavioral and attitudinal dimensions has been supported by a number of authors (Bennett & Bove, 2002; Wong & Sohal, 2003).

In regard to this, the most commonly used measures for operationalization of customer loyalty are repurchase intentions (Cronin & Taylor, 1992; Fornell et al., 1996; Zeithaml et al., 1996; Bloemer et al., 1999); intentions to recommend the company to friends (Bei & Chiao, 2006; Baumann et al., 2007); price indifference, i.e. the willingness of customers to pay more (Fornell et al., 1996; Zeithaml et al., 1996; Bloemer et al., 1999); customer complaints (Bloemer et al., 1999; Zeithaml et al., 1996); word-of-mouth communication (Bloemer et al., 1999), etc.

Beyond this, Iacobucci and Ostrom (1996) and Reynolds and Arnold (2000) argued that loyalty built on individual-to-individual relationships is different than loyalty built on individual-to-firm relationships. Macintosh and Lockshin (1997) empirically demonstrated discriminant validity between commitment to salesperson, i.e. loyalty at interpersonal level and loyalty at store (company) level. Moreover, according to Beatty et al. (1996), given that in retail environment customers prefer personalized services, their primary loyalty is not to the store, but to the retail sales

employees. Prior studies suggested that loyalty to the salesperson is positively related to loyalty to the company in the retail context (Reynolds & Arnold, 2000; Wong & Sohal, 2003). Certainly, the interpersonal relationships play an important role in retail contexts and consequently in retail banking contexts.

2.2 *Service Quality*

Although service quality literature has evolved over the years, there is no precise definition that fully explains the concept of service quality. Nevertheless, it is generally accepted that service quality should be defined and measured from a customer perspective (Grönroos, 1984; Parasuraman et al., 1985; Rust & Chung, 2006; Golder et al., 2012) and that service quality is a multidimensional concept (Parasuraman et al., 1985, 1988; Cronin & Taylor, 1992; Kang & James, 2004).

Traditionally, the service quality theory is based on the literature about product quality and customer satisfaction (Brady & Cronin, 2001), and it actually derives from the expectancy disconfirmation paradigm (Oliver, 1980). The definitions of service quality generally come from the idea that this concept is the result of a comparison between the expectations of customers for the service and their perceptions of how the service is performed (Grönroos, 1984; Parasuraman et al., 1985, 1988; Lehtinen & Lehtinen, 1991; Caruana et al., 2000).

Based on the assumption that perceptions that exceed the expectations of customers will result in a positive disconfirmation and a satisfactory level of service quality Parasuraman et al. (1985, 1988) developed the SERVQUAL instrument which is the most widely applied in studies that measure service quality in different service sectors, as well as in banking (Gerhard et al., 1997; Caruana, 2002; Wei, 2009; Kheng et al., 2010; Kumar et al., 2010; Malik et al., 2011; Siddiki, 2011; Hanzae & Nasimi, 2012).

SERVQUAL comprises five service quality dimensions, i.e. (1) tangibles; (2) reliability; (3) responsiveness; (4) assurance; and (5) empathy (Parasuraman et al., 1988). Tangibles and reliability refer to the appearance and effectiveness of the company as a whole, while the other three dimensions have a personal component, because they reflect the behavior and attitude of the employees in the company. Regarding the relative importance of these dimensions, empirical evidence has shown that human performance plays a major role in consumer perceptions of service quality. Thus, reliability, which often depends on the human factor, is identified as the most important dimension, followed by responsiveness, assurance, and empathy (Parasuraman et al., 1988).

Although the SERVQUAL dimensions represent five conceptually different aspects of service quality, they are interrelated (Parasuraman et al., 1991). In further research, the overlaps between the identified dimensions were found, especially between reliability, responsiveness, and empathy (Parasuraman et al., 1994; Gerhard et al., 1997; Yap & Sweeney, 2007; Wei, 2009). Despite the attempts of some authors to identify generic dimensions of service quality, empirical research shows

that service quality dimensions vary across different cultural (Malhotra et al., 2005) and service contexts (Babakus & Boller, 1992).

Some authors claim that SERVPERF scale which was developed based on SERVQUAL (Cronin & Taylor, 1992, 1994), using only perceptions items, has higher explanation power than SERVQUAL in measuring service quality (Babakus & Boller, 1992; Cronin & Taylor, 1992; Dabholkar et al., 2000). Although the SERVPERF has not reached the mass application of the SERVQUAL, a number of studies confirm the superiority of measuring service quality based solely on performance (Zeithaml et al., 1996; Cronin et al., 2000; Dabholkar et al., 2000; Lee et al., 2000; Andronikidis & Bellou, 2010). In this study, service quality is measured by using only perception items, i.e. SERVPERF instrument.

2.3 Customer Satisfaction

Customer satisfaction is a widely researched concept in consumer behavior and marketing studies (Hossain et al., 2015; Makanyeza et al., 2016) since it is an important aspect in building long-term relationships with customers (Ciunova-Shuleska & Palamidovska-Sterjadovska, 2019). Although customer satisfaction is analyzed as a separate construct from service quality (Dabholkar et al., 2000), they are highly related concepts. Regarding the time focus, it is generally considered that the nature of customer satisfaction is based on an individual transaction, while the service quality is a cumulative assessment (Cronin & Taylor, 1992; Oliver, 1981; Parasuraman et al., 1988). Moreover, some authors apply a cumulative perspective in analyzing customer satisfaction (Anderson & Fornell, 2000; Anderson et al., 1994), explaining it as “a full score based on the total experience related to buying and using a product or service over time” (Anderson et al., 1994, p. 54).

The customer satisfaction literature is based on the expectancy disconfirmation paradigm (Oliver, 1980) which means that when performance exceeds expectations, a positive disconfirmation occurs that leads to customer satisfaction, while performance that falls short of expectations results in a negative disconfirmation and customer dissatisfaction (Oliver, 1980). In addition, Oliver (2010) adds that customer satisfaction is an evaluation of the level of fulfillment of customer needs (satisfactory level, lower or higher level) provided through the product/service and its characteristics. Based on the cumulative perspective in analyzing customer satisfaction, it is explained as “a full score based on the total experience related to buying and using a product or service over time” (Anderson et al., 1994, p. 54).

3 Hypotheses Development

3.1 *Service Quality and Customer Satisfaction*

Service quality is the main antecedent of customer satisfaction (Wu, 2014) and the research studies done in the past confirmed the positive relationship between service quality and customer satisfaction in different industries (Lee et al., 2000; Gong & Yi, 2018; Ghobehei et al., 2019), as well as in the retail banking sector (Ladhari et al., 2011; Janahi & Al Mubarak, 2017). Beyond this, what should be analyzed is the intensity of the effects of specific service quality dimensions on customer satisfaction (Yilmaz et al., 2018).

Thus, the research of Awan et al. (2011) showed that functional quality is the main determinant of overall service quality and customer loyalty. The results of a study by Kheng et al. (2010) suggest that consumer satisfaction has a mediating effect on the relationship between the dimensions of service quality and customer loyalty, with a significant impact on reliability, empathy, and assurance. In general, the intangible aspects of service quality have a greater impact on customer satisfaction, while most studies point out that tangible elements are the least significant dimension of service quality (Siddiki, 2011) or have no significant impact on customer satisfaction in the banking sector (Baumann et al., 2007; Kheng et al., 2010; Hanzae & Nasimi, 2012). Reliability is often identified as the first or second most important dimension of service quality (Kheng et al., 2010; Kumar et al., 2010; Malik et al., 2011). Therefore, the following hypothesis is proposed:

H1. The specific dimensions of service quality are positively related to customer satisfaction.

3.2 *Service Quality and Customer Loyalty at Two Levels*

Often, customer loyalty is implicitly analyzed as a dependent variable in service quality models (Fornell et al., 1996) and number of studies investigated and confirmed the positive relationship between service quality and customer loyalty (Boonlertvanich, 2019; Prentice & Kadan, 2019; Alam & Noor, 2020).

Previous studies investigated the influence of service quality on customer loyalty analyzing the direct relationship (Bloemer et al., 1999; Zeithaml et al., 1996; Wong & Sohal, 2003), as well as the indirect relationship (by inclusion of customer satisfaction as intermediary) (Dabholkar et al., 2000; Caruana, 2002; Baumann et al., 2007). Some authors have come to the conclusion that service quality, both directly and indirectly, affects customer loyalty, i.e. their intentions for behavior (Cronin et al., 2000; Varki & Colgate, 2001; Bou-Llusar et al., 2001; Bei & Chiao, 2006).

Wong and Sohal (2003) and Bloemer et al. (1999) focused on the effect of individual dimensions of service quality on loyalty. Bloemer et al. (1999) concluded

that individual dimensions of service quality have different importance in explaining individual dimensions of loyalty (word-of-mouth communication, intentions for repurchase, price sensitivity and customer complaints) in different service sectors.

Specific to the study of Wong and Sohal (2003) is that they analyzed customer loyalty at the company level and at the interpersonal level (loyalty to service staff). Thus, research has shown that the material aspects of service quality are the most important predictor of loyalty at the company level, while empathy is the most important predictor of loyalty at the interpersonal level. Therefore, this research investigates the relationship between the service quality dimensions and loyalty at interpersonal level and at bank level, i.e. direct relationships between service quality dimensions and loyalty at bank level and loyalty at interpersonal level are included in the conceptual model.

H2. The dimensions of service quality are positively related to customer loyalty to bank.

H3. The dimensions of service quality are positively related to customer loyalty to employee.

3.3 Customer Satisfaction and Customer Loyalty at Two Levels

The positive relationship between customer satisfaction and loyalty was confirmed in previous studies (Mohtasham et al., 2017). Namely, Palamidovska-Sterjadovska and Ciunova-Shuleska (2017) confirmed the relationships among service quality, customer satisfaction and loyalty, respectively in the North Macedonian mobile service sector. Additionally, the findings of Al-Hawari et al. (2009) and Ladhari et al. (2011) supported the strong impact of service quality on customer retention in the context of traditional banking.

Reynolds and Arnold (2000) empirically proved that loyalty to salesperson is a significant antecedent to loyalty to company and that customer satisfaction influences both loyalty to employee and loyalty to company. Additionally, Macintosh and Lockshin (1997) also suggested that commitment (loyalty) to the salesperson is positively associated with loyalty at company level. Given this prior research the following hypotheses are developed:

H4. Customer satisfaction is positively related to loyalty to bank.

H5. Customer satisfaction is positively related to loyalty to employee.

H6. Loyalty to the employee is positively related to loyalty to bank.

3.4 The Mediating Role of Customer Satisfaction

The influence of service quality on customer loyalty is investigated through the mediating role of customer satisfaction (Dabholkar et al., 2000; Caruana, 2002; Baumann et al., 2007). There is empirical evidence that customer satisfaction mediates the relationship between service quality and loyalty (Cronin et al., 2000; Dabholkar et al., 2000; Caruana, 2002; Al-Hawari et al., 2009; Kheng et al., 2010; Ladhari et al., 2011; Makanyeza & Chikazhe, 2017; Moslehpour et al., 2018). Therefore, in this study, first the indirect effects of service quality dimensions on loyalty to employee through customer satisfaction are tested. Then, the indirect effects of service quality dimensions on loyalty to bank through customer satisfaction are tested; as well as the indirect effects of customer satisfaction on loyalty to bank through loyalty to employee.

4 Methodology

4.1 Study 1

In the study 1 an exploratory factor analysis (EFA) was conducted for data reduction and for refining the generated inventory of items on a sample of 208 private clients of banks in North Macedonia. The inventory refinement resulted in a reliable and valid instrument for measuring North Macedonian banking service quality, encompassing both functional and technical aspects of service quality. Functional aspects of service quality were measured with SERVPERF (Cronin & Taylor, 1992) while technical aspects were adapted from Lassar et al. (2000). Three key constructs were identified as end results of EFA: (1) intangibles (2) pricing and (3) tangibles with 13 items with stable factor loadings. Further, confirmatory factor analysis (CFA) was performed to assess the proposed three-dimensional structure of service quality and to further examine the validity.

The obtained factor structure of service quality construct is in line with the findings of Gerhard et al. (1997), Wei (2009), and Yap and Sweeney (2007) where the five SERVQUAL dimensions were grouped into two, tangibles and intangibles. Additionally, in this study pricing emerged as a unique dimension referring to the technical service quality. Consequently, the first three hypotheses H1, H2, and H3 were subdivided into three sub-hypotheses for each, in order to explain the relationship of intangibles, pricing and tangibles to customer satisfaction, loyalty to bank and loyalty to employee, respectively. All research hypotheses guiding this work are illustrated in Fig. 1.

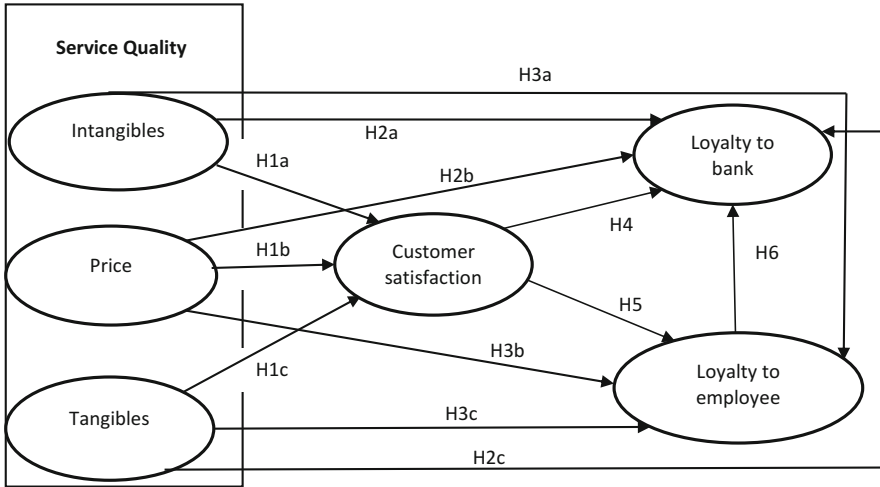


Fig. 1 Conceptual model and hypotheses. Source: authors own study

4.2 Study 2

In this study convenience sampling was applied for data collection through field survey of retail banking clients in North Macedonia. The respondents were intercepted and asked to answer the questionnaire during the period September–December 2019. A total number of 870 questionnaires were obtained and after data cleaning 786 effective responses were held.

The questionnaire consisted of two parts. The first part was designed to measure customers’ perceptions of bank’s service quality performance, based on the study 1. The second part of the survey included items measuring customer satisfaction, loyalty to bank and loyalty to employee, adapted from the previously reviewed literature. Items measuring customer satisfaction were adapted from the study of Fornell et al. (1996); loyalty to bank was measured using items derived from the studies of Bloemer et al. (1999) and Zeithaml et al. (1996), while loyalty to employee’s items were adapted from the study of Wong and Sohal (2003). All the items were measured on a seven-point Likert scale, ranging from 1—strongly disagree to 7—strongly agree. The original items which were in English were first translated into Macedonian and afterwards back-translated into English. Sample structure in terms of demographics is presented in Table 1.

Table 1 Demographic characteristics of bank customers in the study 2

Demographics	<i>N</i>	%
<i>Age (average)</i>	37.3	
<i>Gender</i>		
Male	257	42.60
Female	346	57.40
<i>Education</i>		
Primary	7	1.20
Secondary	244	40.50
University level	332	55.10

Source: own work

5 Analysis and Results

In the main study an integrated model of customer loyalty was developed and tested by performing three steps. First, CFA was performed for testing the measurement model. Second, the structural model was created and the proposed relationships in the model were tested. Finally, mediation analysis was performed.

The previously identified three service quality constructs together with the three dependent variables: (1) customer satisfaction (2) loyalty to bank and (3) loyalty to employee were used to develop and validate the conceptual model. The loyalty to bank and loyalty to employee were analyzed as separate variables.

Structural equation modelling (SEM) was applied as an analytical approach to data analysis. Maximum likelihood estimation technique was used which generates the smallest possible residual covariance matrix. In the data analysis the two-stage procedure suggested by Anderson and Gerbing (1988) was followed. The testing for linearity and multicollinearity showed that the key assumptions for multivariate analysis are satisfied as required precondition to test the structural model.

5.1 Measurement Model

The measurement model incorporates six constructs in total, i.e. three constructs that measure service quality: (1) intangibles (I) (2) pricing (P) and (3) tangibles (T). The three other constructs were added to the model in order to measure the impact of service quality on performance: (1) customer satisfaction (CS) (2) loyalty to bank (LB) and (3) loyalty to employee (LE). The validity of the measurement model was examined through confirmatory factor analysis (CFA). The final model consisted of 16 items, measuring the six constructs. All model-fit indices are above the recommended threshold values ($\chi^2/df = 1.98$, GFI = 0.96, AGFI = 0.94, NFI = 0.96, CFI = 0.98, and RMSEA = 0.04). The obtained factor loadings for the measurement model are presented in Table 2.

Table 2 Statistics of construct items

Constructs/Items	FL	CR	AVE	Mean	SD
Intangibles		0.86	0.60		
I1: When you have a problem, my bank shows a sincere interest in solving it.	0.77			5.25	1.48
I2: My bank performs the service right the first time.	0.76			5.39	1.36
I3: Employees in my bank give you a prompt service.	0.79			5.41	1.50
I4: Employees in my bank are never too busy to respond to your request.	0.77			5.07	1.49
Pricing		0.80	0.67		
P1: The costs of services in my bank are acceptable and appropriate.	0.83			4.73	1.59
P2: My bank has favorable interest rates of credit and deposit products.	0.80			4.40	1.61
Tangibles		0.82	0.60		
T1: My bank has modern looking equipment.	0.74			5.64	1.25
T2: My bank's physical facilities are visually appealing.	0.80			5.36	1.33
T3: My bank's reception desk employees are neat appearing.	0.77			5.79	1.30
Customer satisfaction		0.93	0.82		
CS1: Overall customer satisfaction from the bank services.	0.93			5.45	1.19
CS2: Evaluation of the clients' expectations fulfillment.	0.91			5.36	1.26
CS3: Evaluation of bank service from the perspective of "ideal" service wanted from the clients.	0.87			5.11	1.33
Loyalty to bank		0.87	0.78		
LB1: Recommendation of the bank services to relatives and friends.	0.92			5.57	1.46
LB2: The intention to use the services from the same bank in future.	0.84			5.78	1.44
Loyalty to employee		0.91	0.92		
LE1: Loyalty to sales representative of the bank.	0.87			4.64	1.76
LE2: Intention to use in future the services from own bank representative.	0.96			4.74	1.69

Notes: FL, factor loading; CR, composite reliability; AVE, average variance extracted; SD, standard deviation

Source: own work

The results obtained by testing the convergent validity suggest that all items loadings are above 0.70, the composite reliability exceeds 0.70 and the average variance extracted (AVE) for each construct is above 0.50. Hence, the proposed research model can be recommended as an acceptable model (Table 2).

The analyses also support discriminant validity, showing that the square roots of the AVE for each construct reach or exceed the value of 0.50 and the square roots of the average variance extracted (on the diagonal, in bold) are greater than the correlations between constructs (Fornell & Larcker, 1981) (Table 3).

Table 3 Discriminant validity

Constructs	LB	T	RR	P	CS	LE
Loyalty to bank (LB)	0.884					
Tangibles (T)	0.717	0.774				
Intangibles (I)	0.756	0.740	0.775			
Pricing (P)	0.574	0.548	0.486	0.817		
Customer satisfaction (CS)	0.827	0.669	0.772	0.619	0.908	
Loyalty to employee (LE)	0.598	0.461	0.581	0.500	0.633	0.921

Note: Square roots of the average variance extracted are presented on the diagonal in bold and compared to the correlations between constructs

Source: own work

Table 4 Standardized regression coefficients within the structural model

Hypotheses			Standardized regression coefficient	Hypotheses outcome
CS	<---	I	0.57***	H1a: Supported
LB	<---	I	0.15*	H2a: Supported
LE	<---	I	0.29***	H3a: Supported
CS	<---	P	0.30***	H1b: Supported
LB	<---	P	0.03 ^{ns}	H2b: Not supported
LE	<---	P	0.19***	H3b: Supported
CS	<---	T	0.08 ^{ns}	H1c: Not supported
LB	<---	T	0.22***	H2c: Supported
LE	<---	T	-0.10 ^{ns}	H3c: Not supported
LB	<---	CS	0.49***	H4: Supported
LE	<---	CS	0.36***	H5: Supported
LB	<---	LE	0.08*	H6: Supported

Notes: ns = non-significant, *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

Source: own work

5.2 Structural Model

Overall model-fit indices with $\chi^2/df = 1.98$, GFI = 0.96, AGFI = 0.94, NFI = 0.96, CFI = 0.98, and RMSEA = 0.04 satisfy the required thresholds and support the adequacy of the structural model. The R^2 , i.e. the explained proportion of variation in each latent dependent variable (CS, LE, and LB) exceeds 0.50, indicating that overall's model fit is good.

Further, gender, age, and level of education were used as control variables to all the dependent variables. The values of all of the coefficients between the control variables and dependent variable were insignificant, suggesting that the level of customer satisfaction and loyalty is not under the influence of gender, age, and level of education.

Table 4 shows the standardized regression coefficients, significance level, and hypothesis outcome. The results show that three of the tested relationships (H2b,

H1c, and H3c) were insignificant. All of the remaining hypotheses were confirmed, proving positive and significant relationships between the investigated constructs. Thus, H1a, H3a, H1b, H3b, H2c, H4, and H5 are confirmed at $p < 0.001$, while H6 and H2a are confirmed at $p < 0.05$.

First, both intangibles and pricing significantly affect customer satisfaction. These results indicate that intangibles and pricing have strong impact on customer satisfaction comparing to the impact of tangibles, which was proven to be insignificant. Second, intangibles positively and directly impact loyalty to employee and loyalty to bank. Intangibles have stronger impact on loyalty to employee (0.29^{***}) comparing to loyalty to bank (0.15^*). A significant positive relationship is confirmed between tangibles and loyalty to bank (0.22^{***}), indicating that the material aspects have strong impact on the loyalty to bank. Pricing significantly affects loyalty to employee (0.19^{***}), but not loyalty to bank. Third, customer satisfaction significantly affects both loyalty to employee (0.36^{***}) and loyalty to bank (0.49^{***}). This is a confirmation that the customer loyalty (to employees or to bank) is strongly determined by satisfaction. Finally, loyalty at interpersonal level has positive and significant relationship to loyalty at bank level (0.08^*), indicating that the loyalty to the bank is highly determined from the relationship and loyalty which customers develop to the bank employees.

The results obtained in this study are in the same line with the previous research, showing that tangibles are the least important service quality dimension in creating customer satisfaction (Baumann et al., 2007; Siddiki, 2011; Hanzae & Nasimi, 2012). Also, intangibles in terms of human performance proved to have greater impact on customer satisfaction, as Siddiki (2011) suggested. Intangibles are also significant determinant of loyalty at both levels which is in line with the previous findings of the importance of this service quality aspect (Malik et al., 2011). Interesting result was obtained regarding pricing which proved to be significant when related to customer satisfaction and loyalty at employee level, but not with bank loyalty. The explanation behind such result is that more flexible and fair pricing rates are perceived by customers to be acquired through their personal relationship with the specific bank employees, resulting in higher loyalty at this level. At the same time, tangibles are the most important determinant of bank loyalty while they are completely unimportant in the relations to loyalty at employee level.

Customer satisfaction showed strong influence on loyalty to bank and loyalty to employee. Also the influence of interpersonal loyalty on bank loyalty was significant, showing that customer's retention is strongly related with the personal relations developed with the bank employees in the process of using the service. This is in line with the suggestions of Bove and Johnson (2000) that interpersonal relationship between customers and employees is a cheap means for building true loyalty.

5.3 *Mediation Analyses*

In the process of testing the mediation the approach of Zhao et al. (2010) was followed, suggesting that the key indicator in showing mediation is that “indirect effect is significant” (p. 200). The bootstrapping procedure was used which gives opportunity to test multiple mediators simultaneously between independent and dependent constructs. Following the recommendations from the same study, 5000 bootstrap samples at the 95% confidence level were applied.

The testing results showed that intangibles (0.203***) and pricing (0.106***) have indirect effects on loyalty to employee, whereas tangibles have neither direct nor indirect effect on loyalty to employee. Hence, complementary mediation was confirmed for intangibles and pricing, while no mediation was found for tangibles. Further, the results showed significant indirect effect of intangibles and pricing on loyalty to bank (0.319***, 0.17***, respectively), mediated by customer satisfaction. Again, a complementary mediation was confirmed, meaning that both direct and indirect effects exist and point at the same direction. Regarding the tangibles as a dimension of service quality, the direct effect was significant (0.22***) while the indirect effect was insignificant (0.036^{ns}), suggesting that no mediation was found. At the end, the indirect effect of customer satisfaction on loyalty to bank was tested through loyalty to employee and the results (0.03*) showed that significant complementary mediation is confirmed.

The results from testing the mediation effects showed that pricing and intangibles have significant indirect effect on both types of loyalty, at bank and employee level. The mediating role of customer satisfaction is confirmed in this study as in the previous ones (Makanyeza & Chikazhe, 2017; Moslehpour et al., 2018). Also, loyalty to employee is a significant mediator in the relationship between customer satisfaction and bank loyalty. This is in line with suggestions of Wong and Sohal (2003) that loyalty should be measured at two levels: interpersonal level and company level. The mediating role of loyalty to employee confirmed its significance as construct in measuring the relationship between service quality and loyalty to bank. Even more, creating loyalty to employee is a valid way for enhancing customer satisfaction and consequently customer loyalty.

6 Conclusion

The findings of the present study offer several theoretical and practical implications and give significant insight for future scholars and marketing managers in measuring the impact of service quality on customer satisfaction and loyalty. First, measuring the loyalty at both company level and employee level can provide broader and deeper understanding of the forces which have influence on customer retention. Also, the results from the study provide valuable insight about the importance of loyalty to employee in achieving higher customer retention. Moreover, the pricing,

on which customers are usually highly sensitive, has strong effect on customer satisfaction, but does not have significant direct impact on loyalty at company level. This should increase the awareness of marketing managers that intangibles and loyalty to employee are more important in achieving higher rate of customer retention compared to pricing. In this regard, the banks must provide high service quality and to ensure that employees are highly motivated to provide excellent customer experience thus building long-lasting employee-customer relationships which will result in higher loyalty to bank.

Several limitations need to be mentioned about this study. First of all, the data sample includes only retail clients. It would be interesting to extend the research study in future by including business clients as well. Second, the data sample is only from retail banking industry and from one country. Expanding the research study by including other industries or conducting a cross-country analysis might reveal some interesting results. Third, the service quality constructs included in the model are not exhaustive, but are only those which were identified through the procedure of instrument refinement. Fourth, a probabilistic sampling method can provide more valid and credible results comparing to the non-probabilistic sampling method used in this research. Regarding the possibilities for future research, some other concepts may be incorporated and analyzed in order to further develop the integrated approach of customer loyalty modelling.

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Part IV
Eurasian Economic Perspectives: Finance

Indebtedness of North African Firms: Do Family Ownership and Board Attributes Matter?



Oumaima Quidi and Badr Habba

Abstract This paper aims to examine whether family ownership and board characteristics influence the indebtedness of listed firms from North Africa. Our study is a secondary data analysis using ownership, and board data for the period 2014–2018. The sample includes 289 non-financial firms of the region. The GLS random-effects models were appropriate to provide empirical evidence on the effects of family ownership and board attributes (board size, independent directors, and CEO duality) on debt ratio. Other factors are used as control variables (Return on assets, Return on equity, growth opportunities, liquidity ratio, net assets turnover, firm size, and firm age). Findings suggest that family ownership has no significant impact on debt ratio. Among board attributes, only board size affects negatively the debt ratio. Consistent with prior empirical works, findings reveal that growth opportunities and ROE are negatively associated with debt ratio while net assets turnover, firm size, and ROA have a significant positive effect. This study contributes to the growing literature on financing behavior by shedding light on family ownership and governance issues challenging developing countries and by focusing on the indebtedness of firms operating in a less explored region such as North Africa.

Keywords Family business · Debt · Governance · Financing policy · Panel data

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1 Introduction

The capital structure remains a puzzle to be solved. It is one of the most debatable policies in corporate finance (Akinyomi & Olagunju, 2013) and refers to the combination of financial instruments used to finance the firm's activity. Various strategies can be used to raise the necessary funds, but the most basic sources of funding are retained earnings, equity, and debt (Affandi et al., 2012). Interestingly, debt is one of the controversial components of capital structure (Zietlow et al., 2018). In reference to literature, agency costs have an impact on the financial structure of firms and corporate governance helps mitigate agency problems. Corporate governance, as a system of laws, regulations, and factors that monitor firm operations (Gillian & Starks, 1998), could influence strategic decisions, such as those related to financing (Charreaux, 1997).

The purpose of this research is to highlight the effect of some governance concerns, mainly the family ownership and the board of directors attributes on capital structure and indebtedness in particular. On the one hand, scholars have paid closer attention to family ownership while studying financing behavior and this is far from being arbitrary. First, it is justified by the prevalence of family businesses all over the world. They represent between 80 and 98% of firms worldwide (Poza, 2010) and similarly in the Middle East and North Africa (Moussa & Elgiziry, 2019). Interest in family ownership as a determinant of indebtedness derives from the existence of family ties reflecting a socioeconomic environment, culture, and value system that may influence the decision-making process (Seaman et al., 2019). On the other hand, the Board of Directors represents a key governance mechanism and a growing area of research in interaction with financial structure literature.

This paper provides two main contributions. On the theoretical level, this study contributes to the growing literature on family firms by shedding light on a key financial policy, which is widely considered to be one of the main decisions in management and corporate finance (Zata Poutziouris, 2001; Romano et al., 2001; King & Santor, 2008). While most studies compare the capital structure of family firms with that of non-family firms (Succurro & Costanzo, 2019), the present study highlights the heterogeneity of family firms and sheds light on their ownership and governance structure.

On the empirical level, this paper contributes to the literature on an area of investigation that greatly differs from the Anglo-Saxon context. Empirical evidence on this topic from emerging economies, such as the case for most North Africa countries, is still scarce compared to developed countries.

The remainder of the paper is structured as follows: the second section provides a theoretical background of our research question. The third section is devoted to methodology. The empirical results are presented and discussed in the fourth section and section five concludes the discussion.

2 Theoretical Rationale and Hypotheses Development

The financial structure finds its theoretical underpinnings in the seminal work of Modigliani and Miller (1958). Those authors are considered the first to deal with the theory of the structure of capital (Mostafa & Boregowda, 2014). Their work postulated that under some assumptions, the firm's net asset value is independent of its capital structure since financial choices have no impact on the generated flows. Consequently, the firm remains indifferent to financing sources. However, such financial neutrality can only be possible in perfect financial markets.

Modigliani and Miller (1963) analyzed the possibility of rejecting the original assumptions of perfectly competitive markets. They introduced taxation and admitted that indebtedness has a tax advantage since interest is tax-deductible. The more financing depends on debt, the more interest payments will reduce taxes and thus serve as a tax shield. However, one of the limitations of Modigliani and Miller's revised model (1963) is that it does not take into account the increased risk of bankruptcy (Baxter, 1967; Van Horne, 1974). The increased costs associated with the risk of bankruptcy and financial distress will offset to some extent the positive effect of leverage and reduce the value of the firm. Hence, the legitimacy of balancing the advantages and the disadvantages of leverage. Trade-off theory, on its side, is based on research on taxes (Modigliani & Miller, 1963), the costs of bankruptcy and financial distress (Warner, 1977), and agency theory (Jensen & Meckling, 1976). It argues that firms have an optimal debt ratio that balances the tax advantage of debt financing (i.e., debt tax shields), the costs of financial distress, and agency costs.

Nevertheless, the hypothesis of an optimal debt ratio is rejected by the Pecking Order theory. Myers and Majluf (1984) argued subsequently that the firm decision-makers are not interested in maintaining a particular level of debt (optimal target ratio). Since financing choices are mainly determined by the level of information asymmetry, managers choose a financial source that aims to minimize the costs associated with this asymmetry and they prefer internal financing to external financing. Myers (1984) suggests that due to adverse selection, the firm value and the shareholders' wealth may be disrupted by the use of debt. Internal funds are then preferred over debt that is preferred over new equity.

2.1 *Indebtedness and Family Ownership*

Family members are recognized to be long-term investors over several generations (Anderson & Reeb, 2003). They are often involved in top management and serve on the Board of Directors (DeAngelo & DeAngelo, 2000). The purpose of family shareholders is not only to maximize the firm value but also to ensure the company's survival and sustainability, to preserve the family image and reputation, and to prepare the next generations for ownership and management of the business. Several

studies have examined the influence of family ownership on the indebtedness of firms in several countries. They conclude to a positive, negative, or statistically insignificant relationship, according to the trade-offs between risk aversion attitude and family control preservation.

On the one hand, the presence of family members among owners induces to use less debt (Gallo et al., 2004; McConaughy et al., 2001). Debt aversion is then motivated by limiting the monitoring role of creditors (Volpin, 2002) and avoiding the constraints that creditors may cause (King & Santor, 2008). Similarly, family owners may avoid debt financing because it increases the risk of bankruptcy and jeopardizes long-term financial security and profitability (Arregle et al., 2007; Miller et al., 2008). On the other hand, the preference of family owners to maintain control of the firm over generations may limit the issue of new equity. Foreign investors cause dilution of control, which is not accepted within a family firm. Therefore, firms may prefer debt over new equity only when more valued sources of funding (mainly internal funds) are no longer available. From this, it can be deduced that family managers generally base their financial decisions on how these decisions may affect family control rather than on a comprehensive assessment of different available sources of funding (Crocì et al., 2011).

H1: Family ownership impacts (positively/negatively) the debt level of the firm.

2.2 Indebtedness and Board Attributes

Corporate governance becomes increasingly important in accounting and financial literature due to the various financial scandals that have shaken the markets. Concerns about corporate governance have increased from the moment there was a separation between ownership and control of firms (Berle & Means, 1932). The shareholders have become aware that, given their position in the firm and the information asymmetry, can manage the company in the interests of the shareholders, but they can also divert some of the wealth for their benefit and adopt personal strategies. The mechanisms that alleviate governance problems are various in the literature (Fama, 1980; Jensen, 1986). Broadly, they concern ownership structure, audit, compensation policy, and the characteristics of the board of directors.

The legitimacy of the board derives to some extent from the theory of transaction costs (Williamson, 1988). The board of directors can be considered as a tool to exercise in-depth control and guarantee the security of all the transactions undertaken by the firm. Besides, the board of directors is the highest authority responsible for the strategic management of the firm and the most important decisions in particular those relating to financing and investment (Romdhane, 2015). Empirically, Friedman et al. (2003) studied the relationship between corporate governance and the level of debt for a sample of 447 Asian, European, and North American firms. They conclude, for Asian firms, that a weak corporate governance structure is associated with high levels of indebtedness. According to agency theory, high debt is

often seen as a device to govern the opportunistic behavior of managers and plays a disciplinary role (Jensen, 1986; Kaplan, 1989). Therefore, the governance structure may determine the level of indebtedness.

Previous works have shown that the board characteristics play an important role in determining the effectiveness of a firm's corporate governance system. In fact, the attributes of the board of directors (size, composition, etc.) are all instruments that reflect the effectiveness of the board in its monitoring activity. In the same vein, the literature on the board of directors has theoretical and empirical evidence on the relationship between board attributes and the cost of borrowing (Usman, 2019).

H2: Board attributes impact the debt level of the firm.

Previous empirical evidence indicates that board size is one of the factors affecting debt levels. Broadly, a large board of directors represents a strong governance mechanism. Effective corporate management requires a board of directors that plans and makes optimal financing decisions (Shleifer & Vishny, 1997). In this vein, Pfeffer and Salancik (1978) pointed out a significant relationship between the capital structure and the size of the board. For Jensen (1986), firms with high indebtedness have large boards of directors. However, Anderson et al. (2004) found that companies with large boards have low levels of debt because these companies are rigorously controlled by a multidisciplinary team of experts.

H2a: Board size impacts the debt level of the firm.

In addition, independent directors offer the firm technical expertise and privileged information of the environment to improve its performance. They are generally hired for their distinctive skills. Also, their independence from management allows them to oppose the most critical decisions such as financing. Firms with independent directors are less likely to prefer debt as a financing source (Usman, 2019). Besides, Dimitropoulos (2014) revealed that board independence is negatively associated with external funds such as debt.

H2b: Board's independence impacts the debt level of the firm.

The duality of functions between the Chief Executive Officer (CEO) and the Chairman of the Board also generates a divergence of opinion among researchers. Proponents of duality argue that the separation of functions dilutes the power of the CEO and increases the likelihood that the expectations of the CEO and the board of directors will be in contradiction. In this respect, the firm needs to be led by a single person to have clear leadership from a strategy formulation and implementation perspective and should therefore lead to superior performance (Godard, 1998). In contrast, Daily and Dalton (1993) and Mizruchi (1983) point out that duality may grant an influential role to the CEO and be the cause of opportunistic behavior. Therefore, the separation of functions of the CEO and the Chairman of the Board is generally recommended to avoid management entrenchment (Fama & Jensen, 1983). Regarding indebtedness, Berger and Humphrey (1997) studied the relationship between the entrenchment of managers and the capital structure and their results argued that entrenched managers make efforts to avoid excessive use of debt.

H2c: CEO duality impacts the debt level of the firm.

3 Methodology

In order to explicit the methodology adopted in the paper, this section is devoted to the presentation of the data collection, the study sample as well as the variables tested.

3.1 Data Collection

To test our hypotheses, secondary data was used and collected from the “Orbis” financial database (Bureau van Dijk) that provides annual statements and reports. The study relies on panel data from 2014 to 2018. The study sample includes all the active, listed companies from North Africa countries and excludes firms with missing data for the last 10 years. Financial companies were also excluded because of their specific debt policy and requirements. After the application of inclusion and exclusion criteria, the final set is about 289 firms.

3.2 Variables and Model Specification

Harris and Raviv (1991) assert that the definition of explanatory variables for indebtedness is not uncomplicated. Indeed, the diversity of the determinants of indebtedness can be explained by the fact that scholars do not have a comprehensive, structural, and theoretical model to clearly derive the explanatory variables for capital structure. Therefore, the selection of variables is mainly guided by the results of previous empirical studies on the effect of family ownership and board attributes on financial structure. Table 1 provides an overview of the variables selected for this study:

According to the literature, indebtedness can be measured by several ratios. For instance, Rajan and Zingales (1995) used the ratio of total debt to net assets. Chen and Strange (2005) measured indebtedness as total debt divided by the book value of total assets. For our case, and similarly to the work of Cortez and Susanto (2012), we choose debt to equity ratio as a measurement for indebtedness.

As for the independent variables, we focus on four main variables. The percentage of family shares is measured by the proportion of shares held by family members or individuals in the firm (Acedo-Ramirez et al., 2017; Elbannan, 2017). The board size is measured by the logarithm of the total number of directors sitting on the board of directors (Bradbury et al., 2006; Anderson et al., 2004; Kao & Chen, 2004). The board’s independence is measured by the number of independent directors divided by the total number of directors on the board of directors (Bradbury et al., 2006; Anderson et al., 2004). Finally, the CEO Duality is a dichotomous variable (dummy)

Table 1 Variables definition

Variable	Code	Definition	Literature validation
Debt ratio	DEBT	Total debt to total equity	Cortez and Susanto (2012)
Percentage of family shares	FAM	The proportion of shares owned by individuals from one or more families	(Acedo-Ramirez et al., 2017; Elbannan, 2017)
Board size	BVDSIZE	Total number of directors on the board of directors	(Bradbury et al., 2006; Anderson et al., 2004; Kao and Chen, 2004)
Board independent directors	IND	The proportion of independent directors on the boardroom to the total number of directors	Zaid et al. (2020).
Duality	DUAL	= 1 when the CEO and board chairman positions are held by the same person and = 0 otherwise	Bradbury et al. (2006)
Return on assets	ROA	Operating income before depreciation/total assets	Rajan and Zingales (1995).
Return on equity	ROE	Net income to shareholders' equity	Stickney et al. (2007).
Liquidity ratio	LIQ	Current assets to current liabilities	(Deesomsak et al., 2004; Eriotis et al., 2007)
Growth opportunities	GROWTH	Tobin's Q	(Amah and Ken-Nwachukwu (2016)
Net assets turnover	NETASSETS	Sales to total assets	Nurlaela et al. (2019)
Firm size	SIZE	Natural log of total assets	Ramalho, et al. (2018)
Firm age	AGE	The natural log of the number of years since the foundation of the firm	Schmid et al. (2010)

Source: Authors own work

that takes value 1 when the CEO and Board Chairman positions are held by the same person and 0 otherwise (Bradbury et al., 2006).

Family ownership and the characteristics of the board of directors are not the only factors that may influence indebtedness. Other variables may also play a role in determining the structure of the capital. Given the availability of data, we define some control variables, inspired by the literature on capital structure:

- Return on assets (ROA): the commonly accepted measure, as Titman and Wessels (1988) used, is to divide the operating result (EBIT) by total assets. However, we decide to use the measure EBITDA divided by total assets as was the case in the work of Rajan and Zingales (1995).
- Return on equity (ROE): It is the ratio of net profit after tax to shareholders' equity. This indicator summarizes the effects of several decisions regarding investment and financing activities (Stickney et al., 2007).
- Liquidity ratio: To measure this variable, Deesomsak et al. (2004) and Eriotis et al. (2007) use the ratio of current assets to current liabilities.

- Growth opportunities: they are measured by Tobin'Q that equals the market value of a firm divided by its assets' replacement cost (Amah & Ken-Nwachukwu, 2016).
- Net assets turnover: this variable is measured by total sales divided by total assets (Nurlaela et al., 2019).
- Size: Previous studies on the determinants of the capital structure have argued that there is a positive association between debt and firm size (Ramalho et al., 2018).
- Age: The firm's age is the natural logarithm of the number of years since it was founded. Thus, the number of years is calculated by subtracting the year of incorporation from the current year. This is then transformed into a logarithm (Schmid et al., 2010).

All things considered, our study regression equation is modeled as follows:

$$\begin{aligned} \text{DEBT}_{i,t} = & \beta_0 + \beta_1 \text{FAM}_i + \beta_2 \text{BVDSIZE}_i + \beta_3 \text{IND}_i + \beta_4 \text{DUAL}_i + \beta_5 \text{ROA}_{i,t} \\ & + \beta_6 \text{ROE}_{i,t} + \beta_7 \text{LIQ}_{i,t} + \beta_8 \text{GROWTH}_{i,t} + \beta_9 \text{NETASSETS}_{i,t} \\ & + \beta_{10} \text{SIZE}_{i,t} + \beta_{11} \text{AGE}_{i,t} + \alpha_{i,t} \end{aligned} \quad (1)$$

3.3 Data Analysis

Panel data regression is a common analysis technique to test capital structure determinants. Given the existence of some time-invariant variables and heteroscedasticity issues, fixed-effects regression was not appropriate to estimate our model, and a random-effects approach was called for. To this respect, we conducted a random-effects GLS regression (Generalized least squares).

4 Results

In this section, empirical analysis and results are presented using statistical methods and econometric techniques.

4.1 Descriptive Statistics

The following points emerge from descriptive statistics given in Table 2.

On average, firms use 144 percent debt in their financial structure; one explanation is that North African markets are recognized for the lack of due diligence information and the lack of legal transparency. Domestic and foreign investors

Table 2 Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
DEBT	1291	1.444436	1.49982	0.0046263	9.959733
FAM	1445	21.60855	28.77947	0	97.95
BVDSIZE	1400	18.16786	13.66885	1	71
IND	1445	27.91464	26.93612	0	100
DUAL	1445	0.5640138	0.496057	0	1
ROA	1389	5.710912	11.84644	-68.975	51.233
ROE	1321	7.139355	38.40684	-481.77	269.698
LIQ	1399	2.027184	4.976848	0.021	78.952
GROWTH	1317	0.9724381	2.65351	0	91.476
NETASSETS	1347	1.795326	3.207715	0	53.399
SIZE	1397	4.795135	0.8455058	1.619093	6.90377
AGE	1441	1.473079	0.3247549	0	3.030195

Source: Authors own work

have unclear financial information about companies. Thus, investors avoid investing in equity because of the persistent weakness of investor rights protection. This may explain the high level of indebtedness in this region (Mottaghi, 2016).

In addition, findings reveal a low percentage of family ownership: On average 21.60% of owners are individuals from one or more families. Given that family businesses in the North Africa region are prevalent and that our study focuses on listed companies only, it can be argued that family firms operating in North Africa are reluctant to go public because it may dilute family ownership and cause wealth expropriation. Well, large shareholders may expropriate minority shareholders, extract private benefits at the expense of minority shareholders and overall company (Hanafi & Santi, 2013).

Regarding board administration attributes, results show a board size of 18 directors on average. Independent directors represent 28% of the total directors and the average CEO duality is 56%, indicating that, on average, 56% of chairmen are also CEOs in our sample. Moving to control variables, profitability (ROE) varies between -481.77 and 269.698 with an average of about 7.13 which shows that on average North African companies are profitable. The mean values of the Size (4.79) and Age (1.47) variables show that the sample firms are large and mature and can therefore easily have access to external funding such as debt.

4.2 Correlation Matrix

The correlation matrix (Table 3) provides an overview of the correlation coefficients between the different variables used in our regression model. It reveals significant but low correlations between some variables at a level of 10%. Multicollinearity

Table 3 Correlation Matrix

	FAM	BVDSIZE	IND	DUAL	ROA	ROE	LIQ	GROWTH	NETASSETS	SIZE	AGE	VIF
FAM	1											1.17
BVDSIZE	-0.304 ^{***}	1										1.55
IND	0.135 ^{***}	0.114 ^{***}	1									1.85
DUAL	0.0700 [*]	0.329 ^{***}	0.637 ^{***}	1								1.93
ROA	-0.0454	0.101 ^{***}	-0.0308	0.0361	1							1.86
ROE	0.00406	0.0475	0.0348	0.0396	0.537 ^{***}	1						1.45
LIQ	0.0629 [*]	-0.0482	0.150 ^{***}	0.0976 ^{***}	0.0112	0.00993	1					1.11
GROWTH	-0.0233	0.0272	-0.0443	-0.0184	0.495 ^{***}	0.233 ^{***}	0.121 ^{***}	1				1.39
NETASSETS	-0.0432	-0.0240	-0.0227	0.0145	0.0634 ^{**}	-0.0882 ^{**}	-0.120 ^{***}	-0.0644 [*]	1			1.07
SIZE	-0.373 ^{***}	0.447 ^{***}	-0.231 ^{***}	-0.0396	0.0993 ^{***}	0.0530	-0.247 ^{***}	-0.0485	-0.0116	1		1.57
AGE	-0.334 ^{***}	0.0935 ^{***}	-0.192 ^{***}	-0.131 ^{***}	0.0745 ^{**}	0.0539	-0.0498	0.0663 [*]	0.0981 ^{***}	0.157 ^{***}	1	1.17

Source: Authors own work

issues between independent variables are minimal and do not cause a problem for the application of analysis tests.

4.3 Regression Analysis

The effect of family ownership and board characteristics on debt level is measured by two models with debt ratio as the dependent variable: Model (1) takes into consideration only control variables while Model (2) addresses the effect of both independent variables and control variables. The tests were carried out by Stata software. Table 4 displays the random-effects GLS regression results. By reference

Table 4 Regression models

Random-effects GLS regression	Model (1)	Model (2)
ROA	0.0121* (2.53)	0.0112* (2.28)
ROE	-0.0197*** (-8.57)	-0.0203*** (-8.70)
LIQ	-0.00672 (-1.34)	-0.00717 (-1.41)
GROWTH	-0.198*** (-5.11)	-0.190*** (-4.83)
NETASSETS	0.279*** (17.07)	0.276*** (16.73)
SIZE	0.507*** (5.92)	0.539*** (5.66)
AGE	0.182 (0.85)	0.191 (0.83)
FAM		-0.00213 (-0.68)
BVDSIZE		-0.0179** (-2.65)
IND		-0.00193 (-0.50)
DUAL		0.0305 (0.14)
_cons	-1.295* (-2.47)	-1.035 (-1.62)
N	1174	1141
Wald χ^2	517.31	517.50
t statistics in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$		

Source: Authors own work

to model (1) estimation ($X^2 = 517.31, p = 0.001$), profitability shows a significantly negative association between ROE and debt ratio ($b = -0.0197, p = 0.001$) while ROA is positively associated to debt ratio at a level of significance of 0.05. In addition to that, growth opportunities show a significant and negative effect on debt level ($b = -0.198, p = 0.001$) while net assets turnover and size are both positively related to debt ratio at a level of significance of 0.001.

The estimation test of Model (2) ($X^2 = 517.50, p = 0.001$) provides the same associations being discussed in Model (1) between control variables and debt ratio and with the same sign. Regarding independent variables, it can be concluded that family ownership, surprisingly, has no significant effect on the indebtedness of North African firms. Among all the board of directors attributes, only board size negatively affects debt ratio at a considerable level of signification ($b = -0.0179, p = 0.01$).

5 Discussion

The increasingly banking intervention on corporate financing in North Africa and the advantages associated with debt make it an important source of financing for firms of the region, which seem to be taking full advantage of it. The region's economy is bank-based. Thus, banks dominate financial institutions and are the main provider of financing (Ghemawat & Khanna, 1998). Surprisingly, family ownership is not a relevant factor and does not determine the level of indebtedness in the firm, which does not support H1. Given that all the firms of our sample are large, the insignificant effect of family ownership may suggest that the financing behavior seems to become aligned over time so that the percentage of family shares becomes neutral in determining the debt level. The more the family-owned firm grows, the more its financial choices fall within the traditional framework of the orthodox financial theory. Furthermore, Dyer (1989) and McConaughy and Phillips (1999) argued that subsequent generations in family-owned firms tend to professionalize their management and then to make financial decisions in compliance with those of non-family firms. This finding is also in line with the works of El Azizi and Habba (2018). In addition to that, results suggest that among all the tested Board attributes, only the board size has a significant impact on the debt ratio, which partially supports H2. The negative coefficient shown for this independent variable adheres to the works of Alnori and Shaddady (2019) stating that larger boards enforce the usage of low levels of debt in order to improve the firm's performance.

Results related to the impact of profitability are controversial and in line with both the pecking order theory and the trade-off theory. On the one hand, the negative impact of the ROE on debt ratio can be explained by the fact that the more a firm has sufficient retained earnings and enjoys self-financing capacity, the less it needs external sources of financing that are more subject to the presence of information asymmetry. Our results then confirm those of Mulkay and Sassenou (1995) and Colot and Croquet (2007). On the other hand, the impact of the ROA on debt ratio is

positive. According to the trade-off theory, the more profits the firm generates, the more it will choose debt to take more advantage of the tax deduction.

Regarding growth opportunities, this variable has a significant and negative effect on debt ratio. This seems to be consistent with the pecking order theory. The firms of our sample prefer to finance their growth and their investments with retained earnings, even if they have unused debt capacity. This statement is consistent with the hypothesis of underinvestment (Myers, 1977) and in line with prior studies examined by Park and Jang (2013) and Frank and Goyal (2009).

About the net assets turnover, this variable positively impacts the indebtedness of firms. This finding reveals that the more the firm is efficient in generating sales and revenues, the more it can be able to get debt. This is consistent with the signaling theory (Ross, 1977). Net assets turnover enhances the creditworthiness of the firm and systematically its trustworthiness (Becchetti & Conzo, 2011) which gives it several opportunities to finance its activity by debt.

Finally, the positive effect of size on indebtedness can be explained by the fact that information asymmetry and agency costs are typically less severe for larger firms. Hence, they generally have better access to the debt market (Berrada et al., 2020; Myers, 1984). Besides, the effect of size can be justified by lending relationships (Petersen & Rajan, 1995). A large size promotes the reputation of the firm on financial markets (Berrada Al Azizi et al., 2021; Diamond, 1989) and thus makes access to loans and funds easier.

6 Conclusion

This study investigated the influence of family ownership and the board of directors, as governance components, on the capital structure of North African firms. In particular, we tested the effect of family ownership and the characteristics of the board of directors on indebtedness.

Previous literature on capital structure is abundant but not conclusive (Quiddi & Habba, 2021). Our empirical evidence confirmed that none of the classical theories on financial structure provides a complete answer to the real determinants of firms' financing decisions. Findings revealed an insignificant impact of family ownership on debt ratio within firms of our sample. Besides and among all board attributes tested, only board size seems to be a relevant determinant of indebtedness.

Debt policy is one of the key decisions to make since it affects shareholder's wealth and firm value. Exploring its determinants is then of paramount interest for all stakeholders. The paper also gives insights to be considered in future research on financing behavior of firms within North Africa, which is a specific area of investigation, recognized for its particular culture, values, managerial practices, and financial markets.

Nevertheless, some limitations are worth noting. We tested a limited number of variables due to data access constraints. Other measures can be integrated into future research, notably the size of the Audit Committee, gender diversity within the

boardroom, and the country's governance index. In addition to that, our study neglected the activity area effect. It might be interesting to conduct this study in each sector separately over a long period and to analyze the financing behavior of firms under different economic conditions.

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Wealth Management in Bulgaria and Implications of Risk Profile and Taxation on Wealth Allocation



Atanaska Filipova-Slancheva

Abstract The purpose of this study is to review and investigate the wealth management opportunities for Bulgarian citizens, risk profile of individuals, and their wealth allocation in view also of the applicable tax system. Wealth management opportunities are examined based on their trading access, requirements, offering entities. In terms of the Bulgarian individual tax system, certain tax exemptions and preferences for specific wealth management products are applied as the study aims also to investigate whether this affects wealth allocation. Data for wealth management products and services and for tax systems is obtained from publicly available sources. Respective literature related to wealth management, financial assets, Bulgarian wealth management products and services, tax system for individuals, and per wealth management products are reviewed. Findings show that in Bulgaria, there are various wealth management product alternatives. General conclusion, based on semi-structured interviews among 50 Bulgarian citizens, selected on a random principle, is that Bulgarian citizens are conservative to medium risk profile, requiring wealth preservation. Interviewed citizens, lack deep knowledge, expertise, and understanding of the wealth management products and services, their pros and cons. Tax preferences and applicable exemptions on some wealth management products are not significantly affecting wealth allocation.

Keywords Wealth management · Investment profile · Allocation · Taxes · Bulgaria

1 Introduction

The Organization for Economic Cooperation and Development (OECD) defines household wealth as the ownership of economic capital. Wealth includes financial assets, nonfinancial assets, and liabilities (OECD, 2015). Financial assets are

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composed of stocks, bonds, bank deposits, and cash. On the other hand nonfinancial assets are composed of property or vehicles. Based on the OECD definition for wealth (OECD, 2013), the Research Institute of Credit Suisse prepares a yearly datebook on wealth—worldwide and per country. In the last report, data is for 200 countries worldwide and the report is provided since 2000. In 2019 Credit Suisse estimates that total global wealth rose by USD 36.3 trillion and wealth per adult reached USD 77,309, up 8.5% versus 2018 (Shorrocks et al., 2020). From the early to mid-2000s, strong financial and nonfinancial (mostly housing) wealth results in sharp growth. For Shorrocks et al. (2020), the global financial crisis of 2007–08 has a long-lasting impact on wealth distribution. The COVID-19 pandemic might also cause a disruption on household wealth. The United States is the most significant contributor to the rise in total global wealth from 2016 to mid-2019.

The author will try to shed light on the wealth and financial assets of Bulgarian citizens, following the approach by the European System of Accounts (ESA, 2010) and partially the approach followed by the Global Wealth Report (2020). Hence, private pension funds are included, while excluding public ones in valuations of wealth of Bulgarian citizens. For life insurance, author takes into consideration life insurance and annuity entitlements, for nonlife insurance—technical reserves and for investment funds only net assets of household/individual's mutual funds (European System of Accounts, 2010).

In this study, only financial assets are investigated. The composition of financial assets is different in every country and varies considerably, as summarized by Credit Suisse (2020). This is also valid for equities that are held directly by individuals. It is quite peculiar that in some of the major developed countries like Japan and the United Kingdom equities account for 10–15% of total financial assets, while in the United States it is around 30%. There are some countries with over 40%—Bulgaria, Estonia, Finland, Hungary, New Zealand, and Sweden (Credit Suisse, The Global Wealth Report, 2020).

For Bulgaria, Credit Suisse (2019), estimates Total wealth at USD 243 billion with Wealth per adult in 2019 at USD 42,686 compared to USD 3839 in 2000. Credit Suisse (2019) estimates that wealth composition in % in Bulgaria is—liquid assets (currency and deposits) 36.8%, equities (all shares and other equities held directly by households)—43.3% and other financial assets (reserves of life insurance and pension funds)—19.9%.

This paper is contributing to the literature with its in-depth review and investigation of the wealth management opportunities for Bulgarian citizens, their financial assets, and wealth allocation, while also reviewing wealth taxation in Bulgarian and how it affects wealth allocation. Main findings show that in Bulgaria, there are various wealth management product alternatives (financial assets)—bank deposits, direct investments on capital markets, investment (mutual) funds, nonlife, and life insurance products, pension funds. Access is relatively easy, with specific requirements and restrictions related to a minimum amount, tenor applied. Banks are one of the most active player, offering a vast portfolio of wealth management products. Local asset management companies are competitive for discretionary wealth management services and mutual funds. For nonlife and life insurance products and pension funds, direct access exists via distribution networks of companies. In terms

of the Bulgarian tax system for individuals there is no wealth tax, as certain tax exemptions and preferences for specific wealth management products are applied as the study aims also to investigate whether this affects wealth allocation.

The paper is structured into six parts. First two parts are introduction in wealth, wealth management, and wealth management alternatives in Bulgaria and applicable taxation on wealth in Bulgaria. The third part is on selected methodology, stemming from the research objectives. The following objectives are set out: a review of the relevant literature related to wealth management, financial assets, Bulgarian wealth management products and services; a review and specifying Bulgarian tax system for individuals (exemptions and preferences) and per wealth management products; wealth allocation of Bulgarian citizens and outline profile and trends; and to identify implications of individual wealth allocation in view of the tax system. The fourth part is on findings and results and the last part is conclusion. The paper is solely related to wealth and financial assets of Bulgarian citizens, wealth management alternatives in Bulgaria, wealth allocation in Bulgaria, and wealth taxation.

2 Wealth Taxation

Internationally two major types of taxes on individual wealth are applied (Cremer & Pestieau, 2010):

- Net wealth taxes (applied sporadically or periodically on a person's wealth). Sporadically ("capital levies") or on an annual or other periodic bases.
- Transfer taxes (applied on a transfer of wealth). Net wealth taxes—on the net value of the taxpayer's taxable assets (= assets – any related liability). Transfer taxes—on the net value of the taxable assets.

Two basic categories exists: transferor-based (estate tax, gift tax) and recipient-based estate (inheritance tax, gift tax). In summary, the base of a wealth tax is net worth or wealth, which as clarified, includes the value of individual assets minus debts. It is worth mentioning that there is a difference in wealth taxes stemming from their periodicity and occurrence—holding, transfer, or appreciation of financial and nonfinancial assets. While taxes on net wealth are accrued periodically (annually is a common practice), transfer taxes are levied when a gift transfer occurs. For inheritance taxes, this transfer occurs just once in a generation (Brühlhart et al., 2016). Compared to income taxes, wealth taxes can also be progressive, where the tax rate increases along with the taxable amount. Nowadays, there is a worldwide trend toward abolishing net wealth taxes (Drometer et al., 2018). The picture was different 15 years ago, when ten out of twenty-six monitored OECD economies were incorporating net wealth taxes. As of the end of 2020, only Switzerland, Norway, and Spain are applying net wealth tax. Having in mind some recent developments, there is a renewed interest in wealth taxation.

This increased interest in wealth taxation is attributable also to the inequality in many countries. Inequality has increased in terms of income (Atkinson et al., 2011) and wealth (Piketty, 2014; Saez & Zucman, 2014; Saez & Zucman, 2016). The ongoing wealth inequality and changes of tax systems, where progressivity was abolished, encourages the academicians and economists to call for broad redistribution, which to affect tax policy and wealth taxes (Piketty et al., 2013; Förster et al., 2014; Brys et al., 2016; Alvaredo et al., 2017; Saez & Zucman, 2019). Piketty et al. (2013) have proposed the adoption of an “ideal” combination of taxes on capital, covering annual net worth in addition to capital income and bequests. On the other hand, still there are some concerns on implementing net wealth tax related to efficiency costs, administration, and enforcement (Boadway et al., 2010). There is little empirical evidence though, but governments are still not willing to impose recurrent individual taxes on net wealth (OECD, 2018) and address wealth inequality. Wealth inequality in Bulgaria is also researched by some Bulgarian academics. Peshev (2015) analyzes the wealth inequality in Bulgaria throughout a specific time frame—2005–2015. Based on techniques of calculating Gini coefficients—both from individual deposit part and from individual loans part, the author summarized that wealth inequality in Bulgaria is rising. Recently, Guvenen et al. (2019) presented a case for wealth taxes based on efficiency and distributional benefits.

In order to estimate the impact of wealth taxation on wealth allocation, there are certain empirical challenges. Estimating behavioral responses from wealthy individuals, wealth data collection on country level and long-term effects address most of these challenges (Jakobsen et al., 2020). It is worth mentioning that few countries are collecting data on centralized level. Here, of course, measuring assets held offshore is an ever-complicated exercise, having in mind globalization (Alstadsæter et al., 2019). In terms of behavioral response to wealth taxation in developed economies and Europe in particular, there is extensive literature (Zoutman, 2015; Brülhart et al., 2016; Durán-Cabré et al., 2017; Seim, 2017; Jakobsen et al., 2020). These researchers concluded that as an outcome of the wealth taxes, wealth is sheltered with various techniques applied (switching to nontaxable wealth; underreporting some assets among others). Along with this, Harrington (2016) concluded that wealthy individuals in developing countries respond to wealth taxes with offshore sheltering. Londoño-Vélez and Ávila-Mahecha (2018), who investigated behavioral responses to wealth taxes in Columbia (a developing country as is the case of Bulgaria), find clear evidence for individuals' responses to wealth taxes and state revenue agencies initiatives. In case of a progressive taxation applied, individual taxpayers immediately adapt in order to reduce the tax burden by either creatively increasing their debt or not reporting specific assets.

Bulgaria has a very competitive tax system in terms of tax rate, as there is no wealth tax incurred. Individuals in Bulgaria are taxed in accordance with their tax residency status. In the Personal Income Taxes Act (PITA), the scope of taxation is defined, along with respective exemptions. The individuals' tax base composed of annual income generated, no matter the location of the source. In terms of allowable expenses, they are deducted upon determination of the taxable income from the relevant source. The author will briefly present major taxes incurred—inheritance

tax, capital gain tax, dividend tax. For Inheritance tax subject to taxation is the inherited property, including immovable property and the property rights on it as well as all other debts and liabilities located on the territory of Bulgaria or abroad. Exempt from taxation is an inheritance share with a value below BGN 250,000.00, inheritance of the surviving spouse and the lineal heirs and certain other exceptions envisaged by law. Tax liable individuals are the heirs or the covenants. Bulgarian tax legislation, for example, distinguishes between two tax classes—the close relatives and others. The tax base is determined by law considering certain deductions envisaged. The taxable inheritance is divided into Inheritance shares as each heir receives a particular share. The tax rate depends on the municipality and is from 0.4% to 0.8% for siblings and the children of siblings per inherited share above BGN 250,000.00 and between 3.3% and 6.6% for all the others per inherited share above BGN 250,000.00. Gifts are considered a potential means of avoiding inheritance taxation. Hence, gifts taxation prevents inheritance tax through gifts during lifetime (Drometer et al., 2018). In Bulgaria, as in other EU countries, separate systems for inheritance and gifts are implemented.

In terms of taxation on capital gains, the tax rate in Bulgaria is 10% flat (PITA, 2020). It is levied on capital gains and investment income realized from all sources. In terms of dividend income, a 5% final withholding tax at source is levied. Interest income from bank accounts is also taxed, as the tax rate is 8%. The tax is due on the gross interest received. Having outlined these specific taxes, it is worth mentioning also the exempted income. Capital gains from companies listed on the Bulgarian Stock Exchange or on a regulated market in EU/EEA countries are exempted income (PITA, 2020). The same is valid also for coupon payments or discounts on bonds, profit disbursement of new company shares, along with income originating from voluntary pension schemes. All the above-exempted income, is expected to give major wealth allocation stimulus in tax-exempted financial assets, as the chapter also aims to investigate the implications.

3 Research Method

In the study, the following objectives are set out:

- A review of the relevant literature related to wealth management, financial assets, financial instruments and investments, Bulgarian wealth management products and services.
- A review and specifying Bulgarian tax system for individuals (exemptions and preferences) and per wealth management products.
- Wealth allocation of Bulgarian citizens and outline risk profile and trends.
- To identify implications of individual wealth allocation in view of the tax system.

Data for wealth management products and services and wealth allocation is obtained from publicly available sources—websites of financial institutions, financial regulators, and national statistical institutes. Wealth management opportunities

are examined based on their trading access, requirements, and restrictions, entities, which are offering them, among others. The purpose is to outline the pros and cons of financial market in Bulgaria and its market broadness and competitiveness for individual Bulgarian citizens, providing them with attractive returns, execution, and transparency.

In terms of an applicable tax system in Bulgaria and more specifically taxes on financial assets for individuals, data is obtained also from official sources—national revenue agency. There is a limited number of articles and research papers, developed by Bulgarian researchers, on the Bulgarian wealth management and financial assets, wealth management alternatives, and the impact of wealth taxation on wealth allocation. Hence, this paper tries to shed light on wealth management and wealth allocation of Bulgarian citizens also from a wealth taxation perspective.

In view of the research objectives, qualitative research is decided to be applied. Literature review along with semi-structured interviews form the basis of data collection. Interviews are widely applied methods of data collection (DiCiccio-Bloom & Crabtree, 2006). For interviews, semi-structured interviews are selected, due to the fact that they allow exploration of the perceptions and opinions of respondents regarding complex and sensitive issues (Barriball & While, 1994) as is the case with individual wealth. In other semi-structure interviews to be valid and credible a strict data collection process is followed and interview schedule. For interview schedule as summarized by McIntosh and Morse (2015) the domain of the topic should be identified, along with categories and items. The author follows this approach by identifying the domain, categories, and question stems. Questions include keywords from the literature review, related to the topic (wealth of the individual, wealth management, financial assets held and wealth allocation, knowledge and understanding of wealth management alternatives, drivers for the respective wealth allocation and individual risk profile, taxation, and impact on wealth allocation). Development of questions is crucial for quality assurance of the interviews. Three principles of questions construction were taken into consideration—specification, division, and tacit assumption. These three principles include focus, appropriateness, logic, and clarity (Lazarsfeld, 1954). In order to administer the interview schedule, electronic means of communication is selected in order to have more privacy and last but not least due to some lockdown post-COVID measures. In terms of sampling, the author followed some basic principles—minimum of 30 participants, selection of participants based on specific experience, perspectives. As summarized by McIntosh and Morse (2015) sampling based on purpose is crucial. Interviewees are selected on a random principle with representatives of various economic sectors (financial, manufacturing, tourism), various social statuses (wealthy, affluent), entrepreneurs, freelancers, and employed, as for the employed the sample is on more senior positions. The main purpose is to interview the selected participants personally and after 8 closed questions, two open and follow-up questions are to be raised, where participants are encouraged to discuss openly their perceptions (Kallio et al., 2016). In terms of data analysis, it is designed to provide an accurate summary of the perspectives of interviewees. Interviews were conducted in second part of June and July 2020.

4 Results and Findings

In Bulgaria, there are various wealth management product alternatives—bank deposits, direct investments on capital markets, investment (mutual funds), life insurance products, and pension funds. Access to these various wealth management product alternatives is relatively easy, with specific requirements and restrictions related to minimum amount, tenor applied. The following for the financial market in Bulgaria could be summarized. Financial market is broad and competitive for Bulgarian citizens, providing them with attractive returns, execution, and transparency. In order to clarify and provide more information for every alternative—for opening a bank deposit Bulgarian citizens have plenty of possible banks to establish relations with (19 banks are licensed by Bulgarian National Bank and 5 foreign branches) (BNB, 2020). Opening a bank account in local or foreign currency (major currencies—EUR, USD, CHF, GBP) for Bulgarian citizens is easy with standard requirements (identification, minimum amount). For term deposits, there are usually requirements for minimum amount, specific tenor. In terms of direct investment in capital markets, access is via investment intermediaries or brokerage house, as most of the banks have license for these services. On Bulgarian financial markets, more than 60 investment intermediaries are registered with 5 branches of investment intermediaries registered in other EU member states (FSC, 2020).

These investment intermediaries provide access not only to the Bulgarian capital market, but to almost every financial market in the world. It is worth mentioning that Bulgarian capital markets are not that well developed, as the market capitalization by market segments on the Bulgarian Stock Exchange is EUR 4549 million at the end of 2019 (BSE-Sofia, 2020), 7.7% of Gross Domestic Product (GDP) with Total Market Capitalization (including alternative market) EUR 14,267 million or 24.11% of GDP. Investment funds business and mutual funds business, in particular, is also relatively well developed. FSC has licensed thirty-one local asset management companies, which are managing 131 local mutual funds. Along with this, 964 international funds are registered for distribution in Bulgaria (FSC, 2020). As per the official data, 24 non-life insurance companies and 11 life insurance companies are registered for operation in Bulgaria (FSC, 2020). These companies are offering nonlife and life insurance products. Among these products are saving-insurance products, risk-insurance products, unit-linked products, etc. For pension funds, it could be summarized, that 9 pension-insurance companies are registered for operation in Bulgaria, providing management of universal pension funds (II pillar) and voluntary pension funds (III pillar). Major international names are presented, with local pension-insurance companies also making the market competitive.

Based on the calculation of financial assets of Bulgarian citizens—bank deposits, equity and investment funds, nonlife and life insurance, obligatory and voluntary pension funds, National Statistical Institute estimates financial assets of Bulgarian households, and NPISH (Non-profit Institution Serving Households) at EUR 72,942 mln. (Fig. 1).

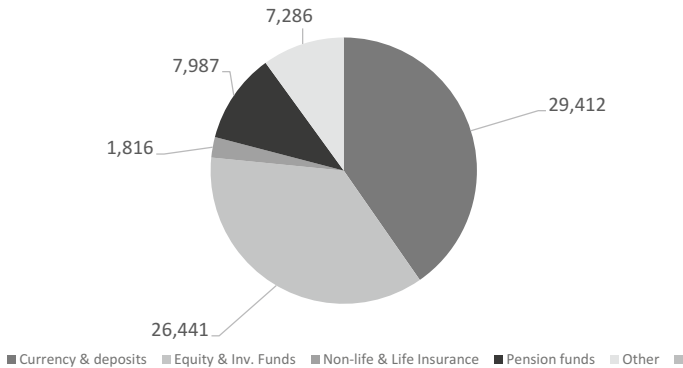


Fig. 1 Wealth structure (Financial assets) of Bulgarian Citizens as of Dec. 19 (in EUR mln.). Source: Author's own study (2020), National Statistical Institute (2020), FSC (2020), BNB (2020)

The European System of Accounts (ESA, 2010) provides guidelines on data compilation. Objectives of this report are the following institutional sectors of ESA 2010: Households (S.14) (Eurostat, 2020) and Non-profit institutions serving households (NPISH) (S.15). Financial assets include eight categories of financial transactions: monetary gold and special drawing rights; currency and deposits; debt securities; loans; equity and investment fund shares or units; insurance, pension, and standardized guarantee schemes; financial derivatives and employee stock options; other accounts receivable/payable (ESA, 2010). There is missing data on monetary gold and special drawing rights. For currency and deposits, bank deposits (transferable deposits and other deposits) of households are taken into consideration. For Insurance pension and standardized guarantees life insurance and annuity entitlements, along with nonlife insurance technical reserves and pension entitlements, claims of pension funds on pension managers and entitlements to non-pension benefits are taken into consideration. Equity and investment fund shares/units include equity (listed shares, unlisted shares, and other equity) and investment funds/units. Bank deposits have the highest share in financial assets of Bulgarian citizens, EUR 29,412 million at the end of 2019 (46.6% of GDP) and 8% growth compared to the end of 2018. In second place comes equity with EUR 25,801 mln. and 31.8% drop compared to 2018 (EUR 37,823 mln.). In third place are pension entitlements, claims of pension funds on pension managers and entitlements to non-pension benefits (pension funds), with EUR 7987 million and 17% growth compared to the end of 2018 (EUR 6830 mln.). In Table 1, balance sheet of financial assets of households and NPISH for the last three years is presented.

In Table 2 are summarized the results of semi-structured interviews among 50 Bulgarian citizens, selected on a random principle.

Questions include keywords from the literature review, related to the topic (total estimated wealth of the individual and total financial assets (Question 1), wealth management, financial assets held and wealth allocation, knowledge, and understanding of wealth management alternatives, drivers for the respective wealth

Table 1 Balance sheet of financial assets of households and NPISH

	31.12.2017	31.12.2018	31.12.2019
Total financial assets	76,439	80,924	72,942
1. Monetary gold and SDRs	Missing data	Missing data	Missing data
2. Currency and deposits	25,282	27,399	29,412
2.1. Currency	552	597	657
2.2. Transferable deposits	6373	7691	9021
2.3. Other deposits	18,356	19,111	19,734
3. Debt Securities	273	214	255
4. Equity and investment fund shares/units	36,843	38,331	26,441
4.1. Equity	36,319	37,823	25,801
4.1.1. Listed shares	1440	1387	25,801
4.1.2. Unlisted shares	13,905	15,043	1615
4.1.3. Other equity	20,974	21,392	9888
4.2. Investment fund shares/units	524	508	639
5. Insurance pension and standardized guarantees	7796	8366	9803
5.1. Nonlife insurance technical reserves	678	834	1006
5.2. Life insurance and annuity entitlements	645	702	810
5.3. Pension entitlements, claims of pension funds on pension managers and entitlements to non-pension benefits	6472	6830	7987
6. Other accounts receivable	5996	6333	6776

Source: National Statistical Institute (2020), author's own study (2020)

Table 2 Results from interviews

Question 1	<EUR 5000 15%	>EUR 5000 63%	>EUR 100,000 23%
Question 2	Limited (2–3) 20%	Moderate (3–5) 55%	Broad (>5) 25%
Question 3	Limited (2–3) 25%	Moderate (3–5) 60%	Broad (>5) 15%
Question 4	Low-risk 40%	Medium risk 35%	High risk 25%
Question 5	Low return 20%	Moderate return 55%	High return 25%
Question 6	Low information 20%	Moderate 55%	Broad 25%
Question 7	Limited (2–3) 20%	Moderate (3–5) 55%	Broad (>5) 25%
Question 8	No impact 45%	Moderate impact 40%	Strong impact 15%

Source: Author's own study (2020)

allocation and individual risk profile, taxation and impact on wealth allocation) and are sent electronically. Based on the semi-structured interviews, the following can be summaries: Interviewed citizens, as is valid for majority of Bulgarian citizens, lack deep knowledge, expertise, and understanding of the wealth management products and services (Questions 2 and 3). Bulgarian citizens are conservative to medium risk profile (Question 4). Require wealth preservation with income, above interest rates on bank deposits (Question 5). Interviewed are not familiar with the pros and cons and which product is appropriate for the respective life stage of the individual (Question 6). In terms of taxation, only 25% have broad knowledge on the specifics of wealth taxation, implied preferences, and exemptions (Question 7). Only 15% of respondents consider applicable taxation as strongly impacting their wealth allocation and inclusion of respective financial assets (Question 8). Open question, where participants are encouraged to discuss openly their perceptions, reconfirmed the main findings.

Unfortunately, there are no studies which to investigate wealth management in Bulgaria, wealth allocation and impact of taxation on wealth allocation with whom the author to compare his findings. There are studies, which separately investigate wealth of Bulgarian citizens, wealth inequality in Bulgaria, and partially wealth allocation.

5 Conclusion

In Bulgaria, there are various wealth management product alternatives—bank deposits, direct investments on capital markets, mutual funds, life insurance products, and pension funds. Market access is relatively easy, with specific requirements and restrictions related to minimum amount, tenor. Banks are one of the most active player, offering a vast portfolio of wealth management products. Local asset management companies are competitive for discretionary wealth management services and mutual funds. For life insurance products and pension funds, there exist direct access via distribution networks of managing companies. In terms of Bulgarian tax system for individuals certain tax exemptions and preferences for specific wealth management products are applied, as there is no wealth tax. General conclusion, based on semi-structured interviews among 50 Bulgarian citizens, selected on a random principle, is that Bulgarian citizens are conservative to medium risk profile. They require wealth preservation with income, above interest rates on bank deposits. Interviewed citizens, as is valid for the majority of Bulgarian citizens, lack deep knowledge, expertise, and understanding of the wealth management products and services. Interviewed are not familiar with the pros and cons and which product is appropriate for the respective life stage of the individual. Deposits account for >40% of wealth (financial assets). Market penetration of other wealth management alternatives at the end of 2019 is relatively low. Tax preferences and applicable exemptions on some wealth management products are not significantly affecting wealth allocation.

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Heuristic Behavior as Mediating Effect of Neurofinance and Entrepreneur's Financial Decision-Making: Evidence of Pretest–Posttest Experiment



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Abstract The contributing factors of failure in financial decision-making are psychology and behavior. Thus, this research aims to examine the mediating effect of heuristic behavior on emotions (neuro function) and financial decision-making. Emotion and financial decision-making of entrepreneurs were identified from the pretest–posttest in experimental analysis. The subjects answered the questionnaire for emotion and financial decision-making in pre-testing experiment. Next, the manipulation of emotions used 12 to 16 minutes of video clips to identify the positive emotion and negative emotion of the subjects. Lastly, in post-testing, the subjects repeatedly answered the emotion and financial decision-making questionnaire followed by a heuristic behavior questionnaire. The data were gathered and analyzed using mediation analysis. The findings showed that heuristic behavior was partially mediated by emotions and financial decision-making. Negative emotion was significantly affected by financial decision-making through heuristic behavior. The neurobehavioral of financial decision-making models were incorporated into the brain components and working memory. Findings from this research would assist the entrepreneurs to make effective and efficient financial decisions if they ignore

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their emotions. This research suggests using other techniques of Structural Equation Model for further analysis, applying laboratory experiment to improve the results, and testing heuristic as moderator.

Keywords Emotion · Entrepreneur · Financial decision-making · Heuristic · Neurofinance

1 Introduction

The financial and business decisions among entrepreneurs are made based on different reasons. They make decisions in different levels of economy and many financial decisions are vastly influenced by business survival. Financial decision-making is highly important for life-shaping decisions that individual and business make for herself/himself or the organization (Frydman & Camerer, 2016). Rationally, persons will predict future choices based on their past actions where they show less volatile and consistent changes in preferences. However, in reality, persons are more irrational on making a decision and follow their guts feeling that lead to the high changes of preferences. Due to this reason, Friedman (2017) applied insights from all social sciences aspects of finance into a new revolution called behavioral finance. He developed a new decision-making model incorporated with psychology and sociology that are related to other disciplines of finance. This will give an impact in explaining economic and financial phenomenon when financial decision-making is done in different psychological patterns (such as heuristic and overconfidence) and different risks and returns in value function. Behavioral bias influences people when they make a financial decision. Thus, Kahneman & Tversky (1973) introduced the prospect that focused on behavioral biases and stressed on heuristic effect.

Most previous researches asserted that heuristic behavior influences financial decision-making. As such, Artinger et al. (2015) and Nigam et al. (2018) proposed heuristic to be tested as mediator and moderator in behavioral finance research. The heuristic and biases are the heart of behavioral model concerning mood and emotions on financial behavior research (Duxbury, 2015). Additionally, Sahi (2012) mentioned that behavioral biases can either be emotional biases or cognitive errors. Emotional biases stem from feelings, intuition, or impulsive thinking whereas cognitive errors stem from a misunderstanding of data, faulty reasoning, statistical miscalculations, or memory errors. However, emotion is the root of financial decision-making (Sjobreg & Engelberg, 2006).

Therefore, neurofinance was introduced as a bridge between brain and financial sciences to obtain a better understanding on the financial decisions of individuals. Neurofinance examines the neurological basis of mental state on a financial decision (Miendlarzewska et al., 2019), especially in emotion. Rocha et al. (2013) found that both types of biases (emotional and cognitive) lead to failure of investment and financial decisions. It is consistent with the statement that entrepreneurs are more irrational in making financial decision. Evidently, almost 95% of SMEs discontinued within 5 years and the contributing factor is a failure in financial decision-making

(Kannan, 2016). Indeed, Wong et al. (2018) found that the entrepreneurs intentionally choose to manage their business's finance directly to meet the personal goals for owning a business. It is sometimes due to the entrepreneur's financial decisions which are not in line with the business objectives. Nevertheless, the studies of irrational behavior of entrepreneur's financial decision-making are still alarming. Hence, the aim of this research is to determine the mediating effect of heuristic behavior on neuro function (positive and negative emotion) and financial decision-making.

Previously, researchers conducted the study of neurofinance using a laboratory experiment by recording the brain activation through various imaging techniques (Dorow et al., 2018; Bothma et al., 2018; Efremidze et al., 2017; Egidi & Sillari, 2017; Nadler et al., 2017; Frydman & Camerer, 2016; Frydman, 2015). However, there are some limitations to laboratory experiments. For example, the uses of data on functional magnetic resonance imaging (fMRI) have already been made to rigorously understand the cognitive operation that gives rise to the pattern of observed financial decisions (Frydman & Camerer, 2016). Thus, Payzan-LeNestour (2017) revealed a new trend in neurofinance that should be applied using a computational approach and natural environment rather than neuroimaging. Most of the participants in previous laboratory experiments involved students who are unlikely to be representative of the general population that causes their responses to the experimental treatment to be distinctive (Bryman & Bell, 2015). Therefore, this research used the natural setting of an experiment which is a field experiment. The field experiment is still in the infancy stage in neurofinance research due to less attention by the practitioners and academicians. In a field experiment, Seshan and Yang (2014), Bursztyrn et al. (2014), and Stinjak and Ghazali (2012) conducted research related to financial decision-making and behavioral finance but excluded neuroscience. Due to that reason, this research was triggered to use field experiment in order to investigate how emotional state explains the reasons why people are not rational in making a financial decision. This research explored the insights from the field of neuroscience by means of dual-process theory (Kahneman, 2003) to identify the brain systems in financial decision-making. From the findings, it showed that heuristic behavior was partially mediated by emotions and financial decision making. Where negative emotion was significantly affected by financial decision-making through heuristic behavior. Brain components and working memory were used to incorporate the neurobehavioral of financial decision-making models. The findings from this study will benefit business owners and any other related bodies in making more effective and efficient financial decisions.

This paper begins with a discussion on the issues related to heuristic behavior in financial decision-making. Then, it reviews financial decision-making, SMEs, heuristic behavior, and neurofinance which are presented in Sect. 2. Section 3 discusses on the theory related to this study. Developments of the hypotheses are presented in Sect. 4. Pre-study, experimental procedure, and method of data analysis are explained in Sect. 5, Section 6, and Sect. 7, respectively. Section 8 presents the results while the discussions are explained in Sect. 9. Finally, Section 10 gives some concluding remarks.

2 Literature Review

According to De Bondt et al. (2015), the traditional finance failed to explain how financial decisions are made by individuals in a certain environment. Investors are assumed to be rational when making decisions as what expected utility is assumed. It means that everybody has the same needs and wants. However, it is not true as mentioned by Kahneman and Tversky (1974) in modern finance. They discovered the existence of behavioral finance in irrational decision-making among decision makers in an uncertain and risky environment. As realized by Frederiks et al. (2015), heuristic can alleviate information processing and accelerate rapid problem solving. It can also eliminate the complex situation, choice, risk, and uncertainty in decision-making. The financial decision-making considers two distinct kinds of decision which are investment decision and financing decision. Investing activities normally happens in large companies through fund managers and are decided by the board of directors. Nyamute (2016) found that the behavioral biases in investment decision-making do not normally affect the investors' performances. They are doing the same mistakes in investment even when their financial literacy level is high. These activities also happened in SMEs where the business owners managed and decided their own investments. Thus, Hua and Wang (2018) asserted that business owners' behavior biases and emotions are related to the rationality of investment decision-making. For financing decisions, entrepreneurs should consider the suitable type of loan for their businesses and how the loan helps to grow the business (Wilson, 2015). Until now, debt is not quite clear in the business owner's context. Not all businesses think that borrowing money is the best solution. Research by Delis et al. (2017) found that few banks can finance poorly performing businesses and help them in the selection of optimal project and monitor their project to improve their performance. Banks actually face lower competition in this situation and charge higher loan rates. This may raise the probability of default for borrowers. Additionally, another important part of financial decision-making is spending decision. The entrepreneur decides on spending to manufacture other products or to resell goods and services to other businesses or customers (Ozmen et al., 2013). Ozmen et al. (2013) added that entrepreneurs often make certain spending decisions that are considered informal spending for their personal use. Even now and then, they make misguided spending decisions that can impact their business performance.

Financial decision-making among entrepreneurs is unique due to the uniqueness of SMEs' characteristics which include unlimited liability, owner's undiversified personal portfolios, incomplete management team, and high experience cost of market. In many countries, SMEs are contributing a big number of shares in the economic development particularly in developing countries. SMEs play an important role to generate employment, stimulate private ownership and stabilize the balance of payments (Aghaei & Sokhanvar, 2020). SMEs are considered as unique assets for development as they provide services that serve as a catalyst of economic growth and a vehicle for the distribution of wealth (Ebrahimi & Mirbargkar, 2017). In small businesses, Smith and Smith (2004) mentioned that entrepreneurs are

usually compelled to invest a significant amount of time and financial capital in a venture. The possible investment choices only happen if certain financing choices are made. The link between investment choices and financing choices among small businesses creates complexity and leads to a high level of debt. In this situation, it will lead to the low financial performance of the businesses. Evidently, the high rate of business failures come from SMEs as compared to large organization (Bloch & Bhattacharya, 2016; Lo et al., 2016). The main factor that contributes to the failure is poor financial decision-making. The evidence by Carraher and Auken (2013) proved that limited knowledge, experience, and different education level frequently lead to unfitting decisions by entrepreneurs. On top of that, the important aspect of entrepreneurs' ability in managing their finances effectively should be taken seriously to ensure the survival of enterprises, especially new entrepreneurs (Ripain et al., 2017). Statistics showed that more than 50% of new entrepreneurs failed in the first 5 years (Reiss, 2006; Armandi, 2015). This is in line with the study done by Nguyen Huy (2001), and Dunn and Liang (2011), which found that the discontinuance of new business start-ups is due to failure in making a financial decision.

Irrational decision-making specifically heuristics is important to consider in financial decision-making. Heuristic is defined as a rule of thumb, usually evolved with experience in the related field, guaranteeing immediate sufficient solution to the problem at hand (Nigam et al., 2018). They serve as a mental shortcut that helps people to simplify and structure the thorough information gathering and analysis in the world (Gál et al., 2013). They also play an important role in minimizing the cost and time in making a complex decision (Riyazahmed & Saravanaraj, 2016). Heuristics behavior will lead investors to evaluate the information objectively. However, emotional and cognitive errors are difficult to ignore. According to Baker and Nofsinger (2010), scholars are continuing to identify, reconcile, and understand heuristics behavior effects in financial decision-making.

The effect of emotion can be explored on judgment and decision-making across disciplines ranging from philosophy to neuroscience. According to Dhmi et al. (2018), the role of emotions in decision-making is disregarded in neoclassical economics. Normally, it assumes that human beings make cold calculated decisions. A growing literature in behavioral economics tries to highlight the relevant role of emotions in many decisions (Dhmi, 2016). The association of positive or negative emotion and affect heuristic influences choices. Emotions refer to people's emotions and it is associated with universal human unconscious needs, fantasies and fear that drive many of their decisions. As highlighted by Winter (2015), the impediment for making decisions is not cognitive but emotional because at the center of emotional obstacles lies regret and the fear of regret. The ignorance of emotional context would lead to incomplete understanding of human behavior (Lo & Repin, 2002; Lucey & Dowling, 2005). Both researchers found that when it comes to money matters and financial decision-making, people are very emotional under the condition of risk and/or uncertainty. For example, Lerner et al. (2014, p. 802) found that *"a person who feels anxious about the potential outcome of a risky choice may choose a safer option rather than a potentially more lucrative option. A person who feels grateful to a school he/she attended may decide to donate a large sum to that school even*

though it limits personal spending.” It shows that the effects of integral emotions happened at conscious and nonconscious levels. Additionally, Schwarz (1990) and Schwarz and Bless (1991) started the investigation of positive and negative emotion implications in their study. They found that negative emotion upholds a difficult chance situation while positive emotion defends the reward situation with proper planning.

A study on the human brain as a processor of information that forms the basis of all decision-making in finance is called neurofinance. By deeply understanding the human brain, it will lead to the field in human financial decision-making behaviors. Emotion is the most important factor in neurofinance. But, it is still lacking literature in studying neuro function namely emotion and cognitive in making financial decisions particularly among SMEs. Thus, emotion is considered in this research as a positive emotion and negative emotion in relation to the financial decision-making. Thompson (2007) found that positive emotion gives a signal of expertise, attractiveness, and agreeability of the good information, while negative emotion signals the generalization of the bad information received. Recent research found that negative emotion appears to be the dangerous conditions from the bad information received (Tartidi et al., 2018), whereas positive emotion produces secured conditions. In relation to the brain functions, there are two types of goal-directed behavior namely reward pursuit and loss avoidance which can be activated or deactivated independently (Peterson, 2010). These systems entail complex processes that involve emotions, cognition, and actual behavior. In financial decision-making, two main parts of the brain are involved which include nucleus accumbent (NAcc) and anterior insula (Sahi, 2012). However, only the anterior insula is associated with emotion and feeling which include feelings of pain, anger, happiness, disgust, and fear in relation to the reward system and loss avoidance system (Peterson, 2007). The reward system communicates through neurotransmitter dopamine and when something valuable is envisioned, this system is activated, and great feelings of well-being are generated. The loss avoidance system gets activated in the light of fear and anxiety that an individual perceives in the environment. This system consists of anterior insula (pain and disgust), amygdala (emotional processing), the hippocampus (memory center), and the hypothalamus (hormone secreting). Both the loss avoidance and reward system lie in the limbic system and they direct individual’s risk behavior through “subtle emotional influences on judgment, thinking and behavior” (Peterson, 2007).

3 The Theories

Prospect Theory and Dual Process Theory are related to this research. According to McDermott (2001), Prospect Theory can be described as risk condition in the theory of decision-making. The theory estimates that in a domain of gain, individuals tend to be risk averse. In contrast, individuals who are relatively risk seeking will be associated in a domain of losses. S-type is represented by the value function of

prospect theory. According to Wan (2018), investors will get profit when they sell the securities first rather than taking certain risks. Apart from that, when the securities are facing uncertain risks, investors tend to hold the securities. With the evolution of cognitive psychology in financial decision-making, there are several personal factors that influence individual's decision-making (Kahneman & Tversky, 1984). The factors are knowledge, education, personality, and behavior. However, these factors are not directly connected to the external variables of individual's decision-making. Thus, the mental process takes place into the brain (Kahneman & Tversky, 1979) and by their own individual's cognitive limitations (Kahneman, 2003).

In relation to that situation, Dual Process Theory is explained and it describes two brain systems which are System 1 and System 2. This theory explains the mistake made by individuals while making decisions (James, 2017). There are two different thinking patterns in this theory which are "fast" thinking (System 1) and "slow" thinking (System 2). System 1 thinking is fast, effortless, and relies on intuition and mental shortcuts (heuristics). However, System 1 is not regularly engaged with System 2 thinking for each of the decisions because System 2 is more deliberate thinking mode, slower, and more taxing in terms of effort. Therefore, understanding both theories is an important step in improving the decision-making process.

4 Hypothesis Development

Scholars are continuing to identify, reconcile, and understand all the heuristics behavior that might affect financial decision-making. Prosad et al. (2015) explored the importance of behavioral biases knowledge which can pursuit sensible and effective financial decision-making among individuals. Kahneman and Tversky (1974, 1979) introduced the heuristics and biases, but unable to completely explain the behavior of decision maker in risky and uncertainty environments. As stated by Sunstein (2002), the heuristic behavior effect suggests that strong emotional reactions are often more cautious. Indeed, heuristics go about as an alternate psychological way and mental shortcut to enable individuals to streamline and structure the far-reaching accumulation and investigation of data worldwide (Gál et al., 2013). At the same time, it is not a direct influence of the formal scientific sense. Due to that, there has been a lot of work in brain science, and social financial matters observationally measure the emotions influence (Dhami et al., 2018). It is bolstered by Baddeley (2010) that the basic decision-making may contrast utilizing conduct of behavior approach that mirrors cooperation of cognitive and emotional factors and catches more powerful decision-making. However, there has been less advancement in building exact procedural models of heuristics that incorporate emotions, and this is probably going to remain a challenging task. Then again, Nigam et al. (2018) focused on heuristics being an imperative research mediator and moderator for financial decision-making. In other words, the different emotions may influence

the financial decision-making mediated by heuristic behavior. Therefore, the hypotheses can be described as:

Hypothesis 1: The mediating effect of heuristic behavior significantly influences the emotion and financial decision-making.

Hypothesis 1a: The mediating effect of heuristic behavior significantly influences the positive emotion and financial decision-making.

Hypothesis 1b: The mediating effect of heuristic behavior significantly influences the negative emotion and financial decision-making.

5 Pre-Study

The population was SMEs in Kelantan. The state of Kelantan was chosen due to its well-known fact that many Kelantanese are actively involved in micro, small, and medium enterprises. In Malaysia, Kelantanese people are famous due to their entrepreneurship capabilities and are admired by many Malay counterparts throughout the country (Yaacob, 2010). Furthermore, they enjoyed a good income, as evidently the statistics showed that Kelantan is ranked at number eight out of fourteen states in Malaysia with 5.1% or 46,618 SMEs operating the business (Department of Statistics Malaysia, 2016). Purposive sampling is an appropriate method as it is part of sample with a purpose in mind. The sample was 150 entrepreneurs who are active with activities and training at Pusat Usahawan MARA” (PUSMA) Kelantan. The Chief Assistant Director of PUSMA assisted in providing a list of 150 active entrepreneurs. The researcher believed that entrepreneurs from PUSMA are fit to be the samples as compared to other individuals when using purposive sampling.

Before starting the experiment, entrepreneurs profiling was conducted to ensure homogeneity and fixed of the subjects. It means that only emotion will influence financial decision-making and it does not include other extraneous factors as they are not the researcher’s interest in the experiment. The demographic profiling questionnaire was used to identify background and level of financial knowledge of 150 entrepreneurs. It consisted of two sections; section A was about entrepreneurs’ background and section B was financial knowledge questions. For the background of the entrepreneurs, the questions included gender, age, marital status, academic qualification, business sector, name of the business, business operation, initial capital, number of employees, business start-off, monthly income, or sales. On the other hand, five financial knowledge questions with seven Likert scale were constructed to identify the level of financial knowledge of SMEs; for example, “I am confident with my financial knowledge to make good decision”; “I know the best investments to look for to get the most return on my money.” Only 76 entrepreneurs replied to the questionnaire. However, only 50 entrepreneurs fulfilled the inclusion criteria which were academic qualification with tertiary level, business age below 5 years, and a high level of financial knowledge. To identify the level of financial

knowledge, the researcher calculated the average score from the responses, which was the total score divided by seven (Kieschnick, 2006). According to Kieschnick (2006), the level of financial knowledge is based on the mean score of Likert scale. Thus, the highest mean score (above 3.5) was considered as exhibiting high level of financial knowledge and the lowest mean score (below 3.5) was considered as possessing a low level of financial knowledge.

Then, the researcher carried out the selection of video clips from Facebook by looking at the emoticons' counts and comments from the users. The video clips were validated using the sentiment analysis and text mining technique to ensure the video clips met the feelings of the subjects.

6 Experiment Procedure

This research involved experimental analysis that used a true experimental design. The design involved pretest-posttest control group and pretest-posttest experimental group in the experimental procedure. The experiment began after getting human ethics approval from Universiti Malaysia Kelantan Human Ethics Committee (UMKHEC). The experiment was conducted at Pusat Usahawan MARA (PUSMA) which involved three separate venues, entrepreneur incubator and two training rooms. In the initial stage, it started with welcoming speech and a short briefing to the subjects. Then, it was followed with the instruction of experiment procedure to the subjects. Next, the consent forms were distributed to the 50 selected subjects. The subjects must read and understand the content in the consent form. They can ask the researcher if they do not understand the content. The subject has to sign the agreement form on the last page of the consent form if he/she agrees to involve in the experiment.

After signing the agreement form, an emotion questionnaire was distributed to the subjects. The subjects rated their current emotion using a seven-point Likert scale from 1 = Never to 7 = Always based on 20 items of emotions including excitement, happiness, fear, and sad. The sample items were "I like a lot of varieties" (excitement emotion), "I have very warm feelings towards almost everyone" (happy emotion), "I feel fear talking to people in authority" (fear emotion), and "I do not have fun with other people" (sad emotion). The subjects who scored low or high percentage of emotion were excluded and the researcher only selected those who were in neutral emotion (based on the default value in Table 1). The percentage score of emotion was calculated based on the total item scores divided by 140 (20 items x 7 = 140) from different responses. The value range and default value were calculated to identify the level of emotion (high, low, neutral) for each subject. The researcher followed the categories of emotions as stated by Krabbe (2017) where he categorized 1 to 2 as low category, 4 to 5 as high category, and 3 as a neutral category. From 50 subjects, 8 subjects were excluded from the experiment, and only 42 subjects were involved. Thus, the homogeneity of the subjects was controlled with academic qualification of tertiary level, business age between 1 and 5 years, a high level of

Table 1 Emotion scale

Emotion scale		Description of each emotion level			
Emotion level		Value range (%)	Default value (%)	Positive emotion	Negative emotion
7	High	86–100	100	The level of emotion is highly positive.	The level of emotion is highly negative.
6		71–86	86		
5		57–71	71		
4	Neutral	43–57	57	The level of emotion is neutrally positive.	The level of emotion is neutrally negative.
3	Low	29–43	43	The level of emotion is low positive.	The level of emotion is low negative.
2		14–29	29		
1		1–14	14		

Source: Krabbe (2017)

financial knowledge, and neutral emotion. Homogeneity participants are important to eliminate possible distortions of the treatment effects on financial decision-making.

Even though the experiment involved a small number of participants, it is reliable and controllable during the experiment (Montgomery, 2013). Evidently, Sekaran and Bougie (2013) explained that it is possible to have a sample size as small as 10 to 20 subjects to ensure the success of the research. Therefore, 42 subjects completed the pretest and posttest experiments designed as true experiments with homogeneous characteristics were employed.

Then, the 42 subjects answered the financial decision-making questionnaire. The questionnaire consisted of four sections in which section A was financial decision-making, section B was investment decision, section C was spending decision, and section D was borrowing decision. Each section is composed of five items. The sample items were “I am more deliberate in making investment decision” (financial decision-making), “I feel more confident in making investment if I understand all the fundamental information of the company” (investment decision), “If I have money, I prefer buying raw materials to manufacture other products rather than other personal things” (spending decision) and “Borrowing is the best solution to recover my financial problems” (borrowing decision). The subjects ranked themselves from 1 = strongly disagree to 7 = strongly agree on how they perform financial decision-making in investment, spending, and borrowing.

The subjects were divided into three groups (two experimental groups and one control group) for the pretest and posttest experiment. Randomization was used to ensure the subjects were randomly assigned to the treatments in an experiment. An alphabet lottery procedure was used to assign treatment to each subject (Ho & Imai, 2008). The experimental group was involved with the treatments in which the subjects had to watch the video clips that changed their mood either in positive emotion or in negative emotion. Meanwhile, the control group was given the session of emotion management to maintain neutral emotion. After assigning the group, those subjects in the control group listened to the ten minutes sharing session of

emotion management. The subjects who were in the experimental group received the emotion treatment (Dunn & Hoegg, 2014) either the treatment of positive emotion and negative emotion. For positive emotion treatment, they watched four video clips consisting of excitement (Iklan Raya 2017 and How Diverse Is Malaysia?!, 2017) and happy (Mael Totey 5, 2019 and Maharaja Lawak Mega 2014—Sepahtu) feelings in genres of drama, comedies, and documentary. For negative emotion treatment, the subjects watched four video clips of fear (Gamology Trailers Korea, 2018 and Tsunami in Japan, 2013) and sad (Lafazkan Kalimah Cintamu, 2018 and Buli, 2018) feelings from horror, dramas, and track jacker genres.

After watching the video clips, the subjects immediately filled in the same emotion questionnaire. The subjects ranked their current emotion at that time to identify the changes of the subjects' emotion from the video clips. Then, the subjects repeated the assessment on financial decision-making through the same financial decision-making questionnaire. Finally, they had to rate themselves on the given scenarios of heuristic behavior questionnaire. This questionnaire consisted of three sections; section A was representativeness heuristic, section B was availability heuristic, and section C was anchoring and adjustment heuristic. The items were constructed in a scenario suitable to the subject's heuristic behavior, especially in a business environment. The samples of the scenario items were "I have bad experience with my supplier. My friend tells me about his/her good experience with the new supplier over the past 3 months. I decided to switch to the new supplier" (representativeness heuristic); "I hear about the best supplier from my business partner. He/She recommends me to buy the products from the supplier. I am likely to buy some products because my business partner is usually right in deciding about these things" (availability heuristic); and "Let's say that I own a share that now reaches maximum price as my expectation. I would sell the share without waiting for the price to increase higher" (anchoring and adjustment heuristic). The subjects assessed their heuristic behavior towards the given scenarios from 1 = strongly disagree to 7 = strongly agree.

The order of questions for the repeated measure of questionnaire such as emotion and financial decision-making questionnaires was rearranged to avoid memorization of the questions (Yang, 2017; Eagle & Barnes, 2009). The process involved in this experiment ended within 60 minutes for each subject including the pretest process, treatment process, and posttest process.

7 Method of Data Analysis

Mediation analysis is used to better understand the question of the mediator effect of X on Y (Hayes & Rockwood, 2017). In this research, it is explained as emotion (X) might affect financial decision making (Y) because of the mediation of heuristic (M). This research used a simple mediation model in which X is modelled to influence Y directly or indirectly through a single mediator variable M causally located between X and Y (Hayes, 2012). Since emotion has three levels (control, positive

and negative), it is called multi categorical variable. Many coding strategies can be used to represent the groups. The analysis used indicator coding which is also known as dummy coding (Hayes & Preacher, 2014). In order to dummy code, the three groups, 2 dummy variables ($D_i, i = 1,2$) were constructed with D_i set to 1 if a case is in group i and 0 otherwise.

The data gathered from the experiment were analyzed using SPSS PROCESS Macro Version 3.3 (PROCESS V3.3) developed by Hayes in 2019 for mediation analysis. PROCESS was used to analyze the general linear regression of multi categorical emotion (control group, positive group, and negative group). A general linear modelling approach was articulated by the researcher to estimate the direct and indirect effects when the independent variable is multi categorical (Hayes & Preacher, 2014). The researcher relied on the fact that mean differences can be estimated with a linear model by representing groups with a set of $k-1$ variables, where k is the number of groups.

8 Results

From the analysis, it shows the effect of emotion on financial decision-making mediated by heuristics as presented in Table 2. The mediating effect of heuristic was significant at 5% significance level (F -value = 10.7174; p -value = <0.0001) on emotion and financial decision making. Thus, hypothesis 1 is supported. However, only negative emotion (D1) significantly reduced financial decision making directly

Table 2 The effect of emotion on financial decision-making through heuristic

Models	Coeff	MSE	t -value	p -value	LLCI	ULCI
Post-test FDM F -value = 10.7174, p -value = <0.0001, $R^2 = 0.3791$ Constant	3.0852	0.7303	4.2245	0.0001	1.6068	4.5637
D1 (Direct Effect) (c'_1)	-0.9279	0.1557	-2.5598	0.0146	-0.7137	-0.0833
D2 (Direct Effect) (c'_2)	-0.4883	0.1320	-1.5885	0.1205	-0.4770	0.0576
Heuristic (b)	0.4280	0.1338	3.1980	0.0028	0.1571	0.6989
Mediation (through Heuristic)	ab	BootSE			Bootstrapped CI	
D1 (Indirect Effect) (a_1, b)	-0.1706	0.1466			-0.6848	-0.1210
D2 (Indirect Effect) (a_2, b)	-0.0898	0.1252			-0.4528	0.0401

Source: Author’s own study

Note: Table 2 shows the result of mediating effect of heuristics behavior on emotion and financial decision-making from the posttest experiment. Direct effect exists when the p -value <0.05. Whereas, the indirect effect exists when bootstrapped CI not fall into 0

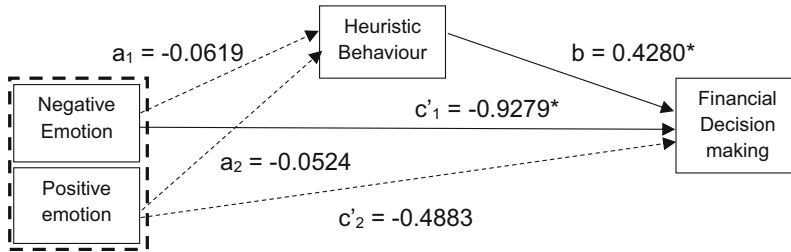


Fig. 1 Heuristic behavior: Partial mediation on emotion and financial decision-making. Source: Author's own study. Note: *Significant level at 0.05

($c'_1 = -0.9279, p\text{-value} = 0.0146$) and indirectly through heuristic since confidence interval did not include zero value ($a_1, b = -0.1706; CI: -0.6848, -0.1210$). It can be said that negative emotions led to low or poor financial decision-making. Therefore, hypothesis 1b is supported. Positive emotion (D2) did not produce a significant direct effect ($c'_2 = -0.4883, p = 0.1205$) and indirect effect ($a_2, b = -0.0898; CI: -0.4528, 0.0401$) on financial decision-making. Thus, hypothesis 1a is not supported. These collective results revealed that financial decision-making was reduced by 0.93% on negative emotion. Moreover, financial decision-making was approximately 0.17% lower (compared with control group) through the indirect effect of heuristic. We can conclude that partial mediation (heuristic behavior) existed on emotions and financial decision-making. The partial mediation effect is shown in Fig. 1.

9 Discussion

Hypotheses 1 and 1b are supported whereas hypothesis 1a is not supported. It indicates that the mediation of heuristic behavior exists and it affects the emotion on financial decision-making. Previously, heuristic behavior has not yet been researched as a mediator. Thus, this research analyzed and tested the heuristic behavior as a mediating variable as suggested by Artinger et al. (2015) and Nigam et al. (2018). The result showed that heuristic behavior partially mediated on emotion and financial decision-making. Hence, it implied that emotion had direct and indirect effects on financial decision-making through heuristic behavior. Referring to Fig. 1, a -path was not significant, so it means emotion did not influence heuristic behavior. It is aligned with experimental research by Duxbury (2015) in which the result showed that the manipulation of cognitive biases influences heuristic behavior but not emotion. It is not important that either a -path or b -path is significant or insignificant because the most important indicator is the significance of ab (Hayes & Rockwood, 2017) (refer to Fig. 1). Even though a -path was not significant (refer to Table 2), the mediation effect still occurred. The result showed that heuristic behavior gave mediating effect on negative emotion and financial

decision-making among the entrepreneurs as compared to the control group. It is consistent with Schwarz and Bless (1991) and Thompson (2007) in which for negative emotion, people generalize any kind of information they receive and feel risk situation that increases improper decision. Vives et al. (2018) and Venkatapathy and Sultana (2016) also supported the result as their research showed that negative information is simply recalled by entrepreneurs which leads to overestimate of the probability on financial decision-making.

In relation to the brain components, middle temporal, insula, medial prefrontal cortex, frontal, and cingulate brain components are associated with emotion (Farrell et al., 2018). When people are in negative emotion, the left amygdala and left anterior insula brain components are activated (Lindquist et al., 2015). Meanwhile, when people are in positive emotion, the nucleus accumbent (NAcc) brain components are activated (Mateu et al., 2017). In general, we can conclude that the left brain (System 1) is activated when the entrepreneurs are in negative emotion. The System 1 thinking occurs when entrepreneurs think fast, easy, and trust on instinct and mental shortcuts (heuristics) as they are more related to risk. However, the right brain (System 2) is activated when entrepreneurs are in positive emotion. The System 2 thinking occurs when entrepreneurs are more thoughtful, rational manner, slower and tougher in terms of effort and they are more related to reward system.

10 Conclusion

The emotion, either positive emotion or negative emotion, gives an effect of either good or poor financial decision-making. Heuristic behavior as a mediating variable examines its mediation effect on emotion and financial decision-making. Pre-test and post-test experiments are used to highlight the effect of those variables. In theoretical implication, entrepreneurs' financial decision-making is not improved and unchanged as it is related to the reward system during positive emotion. In contrast, entrepreneurs make a poor financial decision when they are in negative emotion since it is related to risk or uncertainty. It is consistent with the prospect theory where financial decision-making can be applied in psychological conditions as people's behaviors lead to their risks and rewards. Furthermore, the mediating effect of heuristic behavior partially affects emotion and financial decision-making. For practical implication, it explains entrepreneurs, financial advisors, and policy makers. Entrepreneurs can avoid mistakes in financial decision-making by controlling their emotion, especially when they are in negative emotion. When it comes to money matters, the entrepreneur has to consider just a little bit of emotion. Entrepreneur needs to avoid emotionally and mentally short-cut decision in financial decision-making; thus, he/she must professionally think to ensure a good performance of his/her business. Professional thinking can avoid business from being discontinued. The results also provide insights to the financial advisors as they can test the clients' (entrepreneurs) emotion and behavior using validated video clips and emotion questionnaires. It can improve the professionalism of financial advisors

while advising the client with any new financial products or services. Since negative emotion leads to poor financial decision-making, it means entrepreneurs believe more in their relatives or friends when it comes to financial decisions rather than professional advisors. It may cause the entrepreneurs to be involved in illegal investments. Lastly, the policy makers in Malaysia should plan to increase a good perception of new business start-ups between people. Entrepreneurs must trust the perception of “working hard getting ahead.” Mostly, the new business start-up gets the capital from personal savings and family funds. Thus, the government must make financial services become more competitive and easier to get financial support. Yet, financial support from the government and other agencies are vital for ensuring business growth and survival. Policy makers are expected to disseminate information on different financial assistance they offer to entrepreneurs, in particular to those running rural businesses. In addition, nonfinancial support such as business training and growth, in addition to financial support, is also essential to ensure that entrepreneurs are more creative and innovative in business which can grow their business globally. As a recommendation, this research can be improved by potential researchers using emotion manipulation from the video clips in the laboratory experiment to detect subjects’ brain activation. Without getting any biases, it can recognize the real emotions of the potential subjects. In addition to that, since heuristic behavior only provides partial mediation on emotion and financial decision-making, it recommends future research to test the heuristic behavior as a moderator. Finally, in order to boost the findings, it suggests using other techniques of structural equation model (SEM) for research analysis.

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Part V
Eurasian Economic Perspectives: Regional
Studies

Social Economy Sustainability at a Regional Level—The Case of the Western Macedonia Region in Greece



Miltiadis Staboulis and Georgios Papagiannis

Abstract The role of social economy and its institutional strengthening, especially in recent years in Greece, reinforce the need for research in the particular field. On the other hand, the importance of regional development and the related European regional policies highlight the need for research data for social economy sustainability in a regional context. This article attempts to present the regional characteristics, as they are reported through interviews by members of social cooperative enterprises that could be taken into account in the development of sustainable business initiatives in the field of social economy. Research is carried out in the Region of Western Macedonia as one of the Greek regions with significant economic challenges. The strengths and weaknesses of the specific area and of its social enterprises as well as the sustainability factors of social entrepreneurship, as perceived by the surveyed representatives, are presented. Finally, the results of this qualitative research are examined in conjunction with the priority areas set by the Regional Smart Specialization Strategy. The knowledge of the subject, the support of the administrative structures, the awareness of the citizens for the social economy, and the development of skills are important factors for the effectiveness of social enterprise activities.

Keywords Sustainable development · Social economy · Social cooperative enterprises · Regional development · Smart specialization strategies

1 Introduction

Social entrepreneurship and the sector of social solidarity economy, which in Greece has been institutionally strengthened, have been particularly recognized in recent years. The relationship of the social economy with social innovation and the

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contribution to its strengthening highlight the importance of research and export of research data in this area and especially regarding the potential for the development of sustainable social business initiatives. It should also be noted that linking research to local and regional economic and social priorities contributes to tackling social inequalities and contributes to social cohesion.

On the other hand, the challenges and problems faced by regional actors in their path to achieving the well-being of citizens and regions are many and complex. They are called upon to respond to them in an increasingly globalized capitalist economic system with knowledge intensity and financial instability, with conditions of uncertainty and frequent change and crisis. In addition, growing concerns about climate change and lack of resources, economic austerity policies are among the data that local and regional development policies are called upon to address. The economic, social, and environmental perspectives and potentials of regions and local areas are a crucial issue to be explored given the heterogeneous process of local and regional development (Pike et al., 2007).

The intensity of concerns for economic development is the basis for highlighting other developmental approaches which are distinguished at sustainable community development and social economy. It is noted that the bridging of these two approaches in order to transform their potential is particularly important. This studies initiatives that can link sustainable development at local level by supporting vulnerable groups and individuals and providing opportunities for social and economic change offered by the social economy as, inter alia, a new form of business activity (Connelly et al., 2011).

The contribution of regional development, governance, culture, community, and knowledge infrastructure are factors in creating an advantage (Cooke & Leydesdorff, 2006). It should also be emphasized that European regional development policies, as set out in the respective operational programs and the smart specialization strategy, (GSRT, 2015), are based on the targeting of funding in business activities in areas with specific competitive advantages.

Social enterprises, despite the differences in their size, structure, goals, and time of operation, are integrated with their places of activity and local communities. As important development bodies, they mobilize various resources to achieve a wide range of local development results. The social background of social economy bodies given their organization based on practices determined by a community has its roots in their geographical location, that is in the place of creation and operation of these bodies (Somerville & McElwee, 2011 in Eversole et al., 2014). Geographical area determines the interactions that can affect the social structure in which social entrepreneurship develops and therefore different geographical areas may produce different types of social entrepreneurship and then different types of social enterprises and social economy actors (Zahra et al., 2009; Smith & Stevens, 2010 in Eversole et al., 2014). The above observations indicate that the local and regional context also influences the types of social enterprises that may arise in response to local needs.

The need for research data, useful for the design of relevant policies in order to promote a sustainable perspective of the social economy sector in a regional context,

is also highlighted. This article attempts to contribute to the lack of research data concerning the sustainability factors of social business activities in Greece at the regional level and specifically in conditions of changing economic model as in the case of the region of Western Macedonia.

Thus, starting with the theoretical background the key points of the European Smart Specialization Strategy that related to Greece and the region of Western Macedonia as well as part of the strategic plan of the region are presented. In the following sections of the article are given the main points of the methodological approach of the research and below the research results as well as the discussion with the main conclusions.

2 Theoretical Background

2.1 *Research and Innovation Strategies for Smart Specialization—RIS³ in Greece and the Case of the Region of Western Macedonia*

Regarding the vision of the National Strategy for Smart Specialization 2014–2020, it should be mentioned that it is inspired by the vision of Greece for a high level of quality of life, low environmental footprint, and respect for cultural heritage and cultural creation. The logic of the strategy intervention is the specialized productive reconstruction of a country with the purpose of a sustainable employment by contribution of research, technological development, and innovation. “Smart specialization strategy” means national or regional, innovative strategies that prioritize the exploitation of competitive advantage by matching their own research and innovation with business needs. The strategy seeks the efficient, effective, and cooperative use of the limited resources available in sectors of the economy that meet the relevant conditions. These interventions in the field of innovation in Greece are made with the aim of changing the development model and the productive reconstruction of the country due to the new special challenges and different priorities created by the social and economic crisis (European Commission, 2014; GSRT, 2015).

The key challenge facing the national smart specialization strategy is, on the one hand, to seize strengths and opportunities and, on the other, to address weaknesses and threats. It is also suggested the implementation of regional actions to address the local economy and the focus on the acquisition of technology and innovation based on the entrepreneurial discovery process. It also aims to integrate (the strategy) into regional strategies so that, among other things, the comparative competitive advantages in strategic areas and activities can be identified and exploited with the active involvement of stakeholders at all stages (GSRT, 2015; RWM, 2015).

2.2 The Framework of the Smart Specialization Strategy Plan of the Region of Western Macedonia 2014–2020

In the planning of the respective strategy for the Region of Western Macedonia are marked the directions that can be applied in the region which according to its special characteristics are (a) the renewal of the traditional branches in order to achieve higher added value, (b) the adoption of new technologies, (c) the development of new economic activities, and (d) the exploitation of new forms of innovation such as open innovation, social innovation, user innovation, and service innovation.

In order to effectively plan, the strengths, weaknesses, opportunities, and risks of the Region of Western Macedonia in the Research, Technological Development and Innovation (RTDI) sector were analyzed. Following the capture of the elements that determine the current situation, the vision of the region is formulated which is Realistic Smart Specialization of Investment Priorities as a key development element for creating a sustainable competitive regional economy, with sustainable jobs and social cohesion. Then, the possibilities of sustainable specialization at sectoral and spatial level were recorded, given that while in countries with strong economic growth, changes in the economy are mainly driven by Small and medium-sized enterprises (SMEs), in regions with lower economic growth the transformation of traditional production structures into knowledge-based processes and technology is more difficult due to the social, cultural, and institutional factors by which it is determined. Thus, there are many obstacles to sustainable specialization, including entrenched mentalities, social attitudes and their reluctance to change, the low level of promotion of good practices for forming partnerships and associations. Furthermore, the low culture of innovation, the lack of measures to support it, and the development of cooperatives, as well as the limited dialogue between stakeholders.

Addressing identified barriers by thematic areas determines the possibilities of sustainable specialization. On this basis the positive values of the region are noted, among which are the scientific potential but also the regional resources such as tradition, culture, natural values, and economic structures. However, with the above positive values acting as incentives for overcoming obstacles, the need for joint measures to support the development of innovative businesses, cooperatives, and collaborations between research sectors and SMEs is emphasized.

After evaluating all the qualitative and quantitative data, during the planning of the strategy, the priority areas and by sector included in the plan of the region are:

- Agri-food (Processing—standardization of typical agricultural products/Food, beverages)
- Environment (Energy/Renewable Energy Sources (RES)—District Heating—Metal constructions—Integrated Waste Management)
- Fur breeding—leather products
- Tourism

Also, the proposed sectors with a perspective of diversification and exports are:

- The energy & RES—District heating sector
- The integrated waste management sector
- The traditional branches of rural development and processing, with the predominant one being the fur industry
- The tourism sector (including culture) and
- The special agricultural-livestock products (RWM, 2015)

3 Methodology

For the better conduct of the research and the extraction of useful results in the effort of targeted interventions, the research focuses on a specific geographical area and specifically on the Region of Western Macedonia (hereinafter RWM). The high unemployment rates recorded in this geographical area, combined with the study and exploration of political, social, and economic priorities and strategies in the field of entrepreneurship and innovation to address unemployment are another reason for choosing this region for conducting the research.

The methodological approach of the research consists of the bibliographic review and the conduct of interviews with representatives—chairmen of the Social Solidarity Economy Bodies of the Region of Western Macedonia. Specifically, the views of representatives of Social Economy Bodies (hereinafter SEB) are presented, in the majority of them Social Cooperative Enterprises (hereinafter SCE) of RWM. Considering the interview as the most appropriate research tool, but also as a statistical tool of qualitative research, it was designed, with the help of the pilot research, the semi-structured interview questionnaire. Regarding the research sample of interviews with SEB and after their search by the general register, it consists of 15 representatives—members of SEB of RWM. The research results emerged following the completion of the qualitative research processing of the data collected from the interviews which carried out during the period between March 2019 and the end of 2019. It would be useful to mention that despite the recording of some SCE in the register, when communicating with their representative, they are declared as inactive. It is noted that after the pilot research with SCE members, it was decided to record the views of the legal representatives or the chairmen of the SEB authorized boards. Thus, interviews were conducted with the representatives of eleven SCE of Collective and Social Benefit, an SCE for the Integration of Vulnerable Groups, an Association, and an Urban Company.

The interview questionnaire is divided into two parts. This article presents the results of the questions of the first part concerning elements of the company, its commercial activity, its goals and its obstacles. From the second part of the questionnaire the results that are presented refer to: (a) the characteristics of the region and the SEB, as they are identified by the participants in the research and (b) the sustainability factors of social enterprises.

During the process of studying the transcripts of the research interviews with the representatives of SEB of RWM there were references and repetitive meanings that

contributed to the creation of their thematic units or sub-themes as, in particular, arose from the coding of this data and their grouping. This process also helped in the design of the thematic map where the topics and findings of the research were briefly recorded.

4 Results and Discussion

Regarding the general goal of most SEB, this is to create employment opportunities, followed by environmental protection, social change, support for vulnerable individuals and/or a specific population group, the promotion of a different work model, and the promotion of education. Among the main activities of the bodies are listed, with a series of more reports, cultural activities, tourism services, social welfare, education services and environmental actions, agricultural production, childcare, trade, and food processing. Among the most important obstacles for social enterprises are the lack of financial resources, the lack of liquidity, the inability to secure sponsorships, the lack of awareness of the role of enterprises in the field of social economy, access to consulting services and the institutional and legislative framework.

4.1 Characteristics of Regional of Western Macedonia

Through the interviews, an attempt is made to highlight some of the strengths and weaknesses of R.W.M, as expressed by the participants in the research. This investigation is limited to the strengths and weaknesses of the wider area of R.W. M, which could complement the corresponding analysis of the plan of the region as they were formulated during the research, without proceeding to their further analysis in individual points of the specific analysis tool such as opportunities and threats. The enrichment of the SWOT analysis at regional level would help, in our opinion, when it is done by factors that are active in the specific area. On the other hand, it would be necessary to mention, regarding the use of this particular method of analysis, that although it is a generally accepted simple and practical tool it should not be used as a static tool but as a dynamic one part of the business development process (Pickton & Wright, 1998).

As has been mentioned, the research results obtained after the preparation of the text of the interviews through which the specific formulations of the results were highlighted and presented below. Thus, as shown below (Table 1), strengths of the region are identified to be culture, climatic conditions, and new economic data, due to the de-lignification in the region and provided the appropriate policy implementation planning. According to the frequency of reference in the answers of the respondents as strengths of the region are mentioned the transition to the post-lignite era and the new economic data that are created, the natural environment,

Table 1 Strengths and weaknesses of RWM according to the research participants

Subject/ categories	Strengths/weaknesses	Reference frequency
Characteristics of RWM		
1. <i>Strengths</i>	Transition to the post-lignite era-new data	11
	Natural environment	7
	Opportunities for tourism development	6
	Climate conditions	4
	Services—Infrastructure	3
	Location of RWM	3
	Culture	3
	Education	2
	Co-association culture based on good practices of RWM	2
	Good examples of cooperatives (Velventos-Krokos, etc.)	2
2. <i>Weaknesses</i>	Low level of information of RWM bodies about Social Economy—SE	14
	Low degree of awareness of bodies about SE	8
	Low degree of information for citizens about SE	5
	Financially weak region	4
	Lack of structures related to SE	3
	Unemployment rate in RWM	3
	Population reduction	3
	Small population size	3
	Lack of investment risks	2
	Culture with emphasis on public recruitment	2
	Negative image of co-association due to the past	2
	Lack of presence of a sufficient number of SEB	2
	Funding possibilities	2
	Possible abnormal transition to the post-lignite era	2

Source: authors own study

the possibilities of tourist development, the climatic conditions, the services and infrastructures, the geographical location of the region and culture. In particular, the possibilities of tourism development include references to agritourism, thematic and alternative tourism as well as the dimension of an unexploited but special product of the region. In addition, the reference to climatic conditions includes the microclimate and favorable conditions for sectors such as agri-food, aromatic plants and saffron, while noting the location of the region as a strength emphasizes its potential as a border region with, at the same time, a short kilometer distance from a large urban center.

Although the above points make the most reports, there are others that, as part of a qualitative analysis, are worth studying, including education, cooperative culture, good practices of cooperative initiatives in the region, and the diversification of the needs of the region. Another strength, the report of which may be particularly impressive, is the economic crisis and the low levels of employment that are marked

as a starting point or we could say mobilization for new social and other business initiatives.

On the other hand, the weaknesses with the greatest emphasis concern the field of information and awareness for the social economy, both of the state bodies of the region and of its citizens. In particular, regarding the low level of information of state bodies themselves on the social economy, the lack of knowledge of the services about the legislative framework of the social economy and the low degree of culture development for the social entrepreneurship are underlined.

It is also emphasized that the RWM is an economically weak region with a lack of support structures and strengthening, of the social economy and entrepreneurship as well as with high unemployment rates and a small population which is declining due to both the economic data and the prospects of the region. Also particularly important are the weaknesses mentioned in the lack of presence of a sufficient number of social economy bodies, the culture that has shaped the current development model and the lack of cooperation with neighboring countries.

4.2 Characteristics of Social Economy Bodies of Region of Western Macedonia

The strengths and weaknesses of the SEB of RWM are the two sub-subjects of this thematic unit whose categories include the skills and elements of the internal and external environment of SEB. Specifically, the strengths relate to the characteristics of SEB that contribute to the process of their business activity as factors of sustainability, while respectively the weaknesses relate to the characteristics that do not contribute in this direction.

In their responses, the representative members of the SEB highlighted the strengths and weaknesses of their organization that are related either to their field of skills or to general elements of their own business or its wider environment (Table 2). Starting with the strengths of the skills field, the knowledge of the subject as well as the optimism that characterizes the members of the bodies were mentioned more than any other skill as strengths of the bodies. With fewer reports, characteristics such as dedication, communication skills, opportunity identification, vision, and multiple skills were identified.

Among the strengths related to the internal environment of the company/body are the ability to meet local needs, the human resources of the body, the relations with the partners, the good level of benefits, the field of activity, and the competitiveness of the services. The natural environment and the geographical position of the region, as noted above, are the two the greatest strengths of the external environment of the SEB.

Although the knowledge of the subject was emphasized among the strengths of the SEB, it is also noted by many respondents that the lack of knowledge and the lack of hard and soft skills are among the most important weaknesses of their bodies.

Table 2 Strengths and weaknesses of the SEB of RWM by coding category

Sub subject/categories	Skills/elements of internal & external environment as strengths/weaknesses	Reference frequency
<i>1. Strengths</i>		
<i>(a) Skills</i>	Knowledge of the subject matter	8
	Positive Beliefs/Optimism	4
	Entrepreneurial Opportunity Identification	2
	Loyalty	2
	Vision	2
	Communication Skills	2
	Multiple Team Skills	2
<i>(b) Internal environment</i>	Meeting local needs	5
	Human resources/members	4
	Relationships with partners/beneficiaries	3
	Sector of activity	3
	Competitiveness of services	3
	Specialization/training of members	2
	High expectations	2
	Team cohesion	2
	Solidarity of members	2
<i>(c) External environment</i>	Geographical location	4
	Natural environment	3
<i>2. Weaknesses</i>		
<i>(a) Skills</i>	Lack of knowledge/Hard skills	5
	Lack of skills/Soft skills	3
	Lack of knowledge of financial management	3
	Certification of knowledge of the subject	2
	Lack of administrative support	2
	Lack of qualified staff	2
<i>(b) Internal environment</i>	Lack of funding	7
	Access to finance	5
	Lack of information on SE	3
	Equipment-Infrastructure	2
	Networking	2
	Lack of time/Secondary employment	2
	Lack of administrative support	2
	Selection of partners	2
	Lack of steady flow of funding	2
	Lack of qualified staff	2
<i>(c) External environment</i>	Lack of support	4
	Entrepreneurial environment	3

Source: authors own study

Other weaknesses at the skills level include a lack of administrative support, financial management knowledge, and trained and certified staff.

On the other hand, significant weaknesses in the environment of the SEB are the lack of funding and access to it, networking and lack of information on the social economy. Other weaknesses are the lack of steady financing flow, lack of administrative support, lack of qualified staff, selection of partners, and lack of time of members in the cases of members who treat their work in the body as secondary employment. Finally, the lack of support from the state bodies and the business environment of the region are distinguished here as two of the most important weaknesses related to the external environment of the SEB.

4.3 Sustainability of Social Entrepreneurial Initiatives in Regional of Western Macedonia: Perceived Factors

Also, results are presented regarding the perceived factors of sustainability of SEB, factors that, in other words, the members of the bodies participating in the research consider to contribute to the viability of SCE and SEB in general. These factors are distinguished in the elements of the internal and external environment of the bodies as well as in skills that as the respondents perceive are the hard and soft skills that can contribute to the creation and operation of social business initiatives with a sustainable perspective at regional level (Table 3).

Among the factors of the internal environment of the SEB that can develop their sustainability conditions and which are underlined by the most interviewed are the skills of the members, the cooperation, the field of activity of the bodies, and the financing. The financing also includes reports on the need for capital during the establishment of SEB but also the possibilities of alternative financing perspectives. This is followed by the communication of the members, their knowledge and qualifications, and the response to the local needs. In addition, factors of social enterprise viability are the capabilities of the team members and their experience, the trust between the members and their vision, the initial idea, the common goals, the organization, the entrepreneurial knowledge, and the areas of promotion and standardization of products. One factor that appears above and which emphasizes the need to develop different skills is the diversity of members' knowledge which, elsewhere, is also referred to as multiple skills. Also, as above, the role of local administrations is particularly important for members of social enterprises and here they consider that the administrative support and advisory guidance to address the needs, including funding, of SEB are key factors in enhancing the viability of these businesses.

The skills that according to the perceptions of the representatives of the SEB of RWM that participate in the research contribute to the viability of respective bodies are distinguished into hard and soft skills. Hard skills, which include the most specific knowledge, are the knowledge of the subject and the specialization and

Table 3 Sustainability of social entrepreneurial initiatives in the RWM

Sub subject/categories	Internal/external environmental factors ^a	Reference frequency
1. Perceived factors of sustainability of SEB		
<i>(a) Internal environment</i>	Skills of human resources—members	14
	Cooperation of members	6
	Sector of activity	6
	Funding	6
	Responding to local needs	4
	Communication of members	4
	Knowledge-qualifications of human resources	4
	Team capabilities	3
	Idea (project)	3
	Common goal	3
	Product promotion	3
	Product standardization	3
	Management	3
	Experience	3
	Trust between members	3
	Diversity of members' knowledge	3
	Vision	3
<i>(b) External environment</i>	Entrepreneurship knowledge	3
	Local needs	3
	Administrative support to find funding	3
	Support of state bodies—Consulting	3
2. Perceived skills		
<i>(a) Hard skills</i>	Subject Knowledge	5
	Specialization/Training	5
	Human Resource Management	3
	ICT Knowledge	2
	Foreign Language Knowledge	2
	Subject Technical Knowledge (Technologists)	1
<i>(b) Soft skills</i>	Communication (Oral & Written)	10
	Collaboration	7
	Multiple Skills Ability	6
	Perception of Democratic Values/Processes	5
	Teamwork	5
	Vision	5
	Dedication to the goal	4
	Empathy	4
	Respect/Acceptance of Diversity	4
	Perception	4

(continued)

Table 3 (continued)

Sub subject/categories	Internal/external environmental factors ^a	Reference frequency
	Immediacy	3
	Tolerance	3
	Flexibility	3
	Patience	3
	Goal Achieving	3
	Problem Solving	3
	Goal Setting	3
	Social Sensitivity	3
	Innovation	3
	Critical Thinking	3
	Co-association Mindset	2

^aFactors and skills to enhance the potential for sustainable development of SEB by coding category and their reference frequency by the participants in the research—**Source:** authors own study

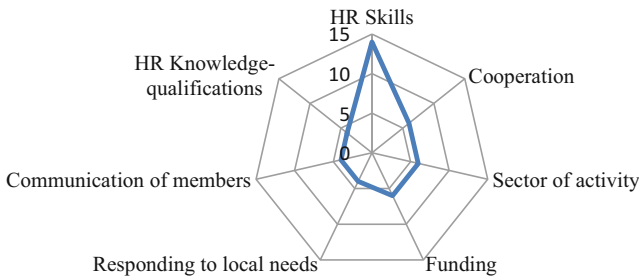


Fig. 1 Most important factors of SEB sustainability. Source: authors own study

training in a specific subject, the management of human resources, the knowledge of informatics and technology, and the knowledge of foreign languages.

The soft skills, most frequently mentioned in interviews, are communication, collaboration, ability in many different skills, perception of democratic values and processes, teamwork and vision. Skills such as targeting, empathy, respect of diversity, and perception follow. In addition, among other soft skills, setting goals, achieving goals, patience, tolerance, flexibility, innovation, and critical thinking are mentioned.

Below, the most important factors and skills for the sustainability of social business initiatives are plotted, according to the frequency of reports by the participants in the research (Figs. 1 and 2).

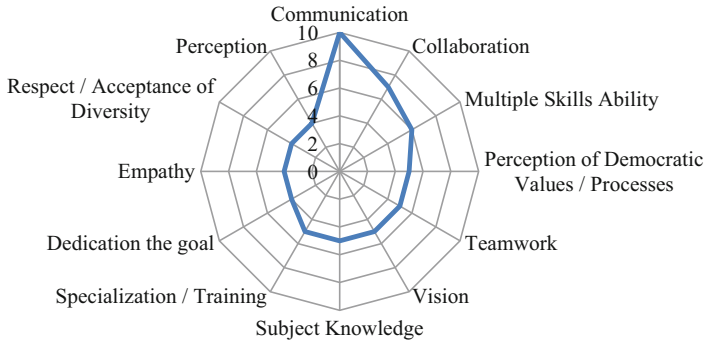


Fig. 2 Key skills for SEB sustainability. Source: authors own study

5 Discussion

Following the presentation of the research results, some more general findings are made. The general goal of most actors is to create employment opportunities, followed by the possibility of change at the social level, the protection of the environment, the promotion of a different working model, and the support of vulnerable population groups, goals which have been noted (Fonteneau et al., 2010), are linked to the fields of contribution of companies in the field of social solidarity economy for the creation of a new sustainable economic model of development. The main activity of most SEB is the cultural activity with the tourism services, social welfare and education services to follow, noting that there are priority areas set by the regional strategy of RWM that are not the object of activity of the SEB of the region.

The main obstacles are securing funding and lack of liquidity, the institutional and legislative framework, and the low level of awareness about the role of the social economy sector. The main obstacle concerns funding, something that is often mentioned in the literature as the main reason for the failure of many local initiatives (Grefe, 2008) as well as the implementation of new ambitious business plans (Borzaga et al., 2000). It is also, mentioned by most, the barrier to accessing consulting and business support services. It is noted that although social capital is an important resource in which social enterprises invest (Kay, 2006; Evans & Syrett, 2007), local infrastructure and local skills are key factors in local development (Eversole et al., 2014).

In the attempt to capture the characteristics of the region, as a record of them by the participants in the research, strengths are highlighted which include the opportunities created by the transition to a different economic model, the natural environment, the possibilities of tourism development, the climatic conditions, the infrastructure of the region and its location. However, there are also weaknesses, mainly the low level of information and awareness of the state bodies and citizens of the region about the social economy, the lack of relevant structures, the

consequences of a possible, uneven transition to the post-lignite period and the region's weaknesses at the economic level mainly unemployment and population decline. The above characteristics contribute to the corresponding analysis included in the regional smart specialization strategy plan (RWM, 2015).

In addition, the strengths and weaknesses of the SEB of the region are reflected, which relate to their skills and their internal and external environment. This research aims to highlight those points, the development of which is linked to the sustainability of companies. As mentioned (Stubbs & Cocklin, 2008), organizations that adopt a sustainable business model must develop internal structural and cultural capabilities as well as collaborations with stakeholders in the system to which the organization belongs. On the other hand, the role of education is particularly important for the knowledge of those peculiarities of the field of social economy that allow the application of knowledge for the combination of business practices to create innovative strategies (Pache & Chowdhury, 2012). On the one hand, the need for the acquisition of the same skills and specialization of traditional entrepreneurs by social entrepreneurs is emphasized but also for the knowledge of those challenges that social entrepreneurs face in their social mission (Tracey & Phillips, 2007).

Regarding the sustainability factors of the social economy bodies, as perceived by the members of the SEB, the skills of the human resources make the most reports, as a factor of the internal environment of the enterprise. In particular, the cooperation of the members, the field of activity, the financing, the degree of response to the local needs, and the communication skills and general knowledge of the human resources are the factors of the internal environment that contribute, to a large extent, to the viability of a SEB. From their external environment, the factors that also enhance the viability of their economic activity are the local needs and the administrative and advisory support for access to finance. Finally, the hard and soft skills that have emerged as factors in the development of sustainable business activities in the field of social economy emphasize the need to design appropriate training programs for capacity building in the field of social entrepreneurship.

The above findings are related to findings of the bibliographic research that refer to both existing theories and theoretical models as well as to specific policy objectives on the subject. Thus, in order to facilitate access to finance, recommendations have been made to address the competence development, financing needs and infrastructure needs of social enterprises. It is recommended to allocate more resources to training programs, which help social enterprises to develop their management skills and achieve financial viability. Promoting, training, mentoring, and raising awareness of private and public financial institutions about the financing of social enterprises, disseminating best practices, and providing specific training for European civil servants are included in the actions of these recommendations (European Commission, 2016). The social networking of social entrepreneurs, the strengthening of the management capacity of their professionalism, the acquisition of management skills, and the development of their business along with the encouragement of interaction between them and the academic research community are mentioned in the context of the respective European policies (European Commission, 2011).

Skills such as creativity, persuasion, collaboration, adaptability, focus on user needs, critical thinking, communication, networking, team building, negotiation, management skills, problem solving, organization and Emotional intelligence frame the general competence for innovation and entrepreneurship (OECD, 2017; Dyer et al., 2009; Caird, 1992).

6 Conclusion

The emphasis on facilitating knowledge and innovation, increasing investment in human capital education, skills acquisition and improving the business environment is constantly given in the respective policy strategies and related actions are defined (European Commission, 2005; Council of the European Union, 2008). In addition, social enterprises need more support through the access to their finance and the improvement of the legal environment. It has also been proposed (European Commission, 2013, 2016) to provide incentives for social entrepreneurs to set up businesses, to establish a European regulatory environment, to strengthen the liaison of experts in social enterprise potential, and to establish capacity building investment programs, recommendations and directions recorded in the above research results. Thus, a plan would be crucial in order to more effectively implement policies to strengthen the social economy sector.

Also, formulating some more specific observations and research limitations, it is noted that as in any research effort, so in the specific qualitative research, the results should be carefully examined and generalizations should be avoided. The investigation of research questions is based on the experience and views of individuals involved in the research process, including subjective criteria. In this interview research there is no element of repetition of the research process in the same research sample and still no causal relationships can be proven. The specific subject of the research does not present corresponding research data of other researches in Greece and at regional level which could be used for the better analysis of the results, but in this way the contribution to the research field and the development of new research data is attempted. Another limitation as reported (Cohen et al., 2000) is that the interview is led by the researcher and therefore may involve subjective dimensions.

Finally, in the context of formulating proposals for the sustainability of the social entrepreneurship sector, in our view, the cooperation among SEB, productive institutions, and educational institutions at regional level is of particular importance with the aim of developing targeted actions in accordance with competitive advantages of the regions. After all, the need to find solutions to the problem of unemployment is urgent and the social economy could make a positive contribution. It has also been reported (Lukkarinen, 2005) that jobs grow and are lost locally. Also, the deepening of the content of the curricula in social entrepreneurship and the adaptations in their design in order to cultivate new skills are an opportunity for the educational system to respond to the new needs for skills in this field. Also, the development of new tools and methods related to the improvement of information

and awareness of state bodies, institutions and citizens about the role and potential of the social economy as well as the design of methodological approaches for the evaluation of social entrepreneurship-related educational programs and economical interventions at regional level are proposals for future research in this scientific field.

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Structural Convergence with Eurozone and Institutional Quality in Bulgaria



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Abstract The paper examines the structural convergence of the Bulgarian economy with the Eurozone, the quality of the Bulgarian institutions, and their interdependence in the 2000–2018 period. The relevance of the structural convergence is interpreted within the context of its connection to the synchronization of the business cycle and the economy’s resistance to adverse external shocks, while the role of the institutional quality is analyzed with regard to its impact on the structural convergence. The assessment of the structural convergence is based on the relative shares of the components of the gross value added and employment by industry breakdowns, while the institutional quality is measured by the effectiveness of the government and the regulatory quality. The research methodology includes the calculation of the Krugman specialization index and index of inequality in productive structure and the use of Bulgaria’s percentile ranking among all countries included in the survey of the World Bank. On the basis of the empirical analysis, a conclusion is drawn about the existence of structural convergence during the bigger part of the period and the ensuing holding back of the structural dissimilarities. The identified dynamics is accompanied and favorably impacted by an increase in the institutional quality in terms of the two indicators.

Keywords Structural convergence · Institutional quality · Government effectiveness · Regulatory quality · Productive structure · Employment structure

1 Introduction

Structural convergence is a relatively new issue that has become the focus of economic science and which has been more actively exploited during the past two decades mostly in the context of the European Union (EU) economic integration. It

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has been viewed as intimately related to the synchronization of the business cycle in different economies, which in turn is projected on the results of the conducted supranational economic policies and the common monetary policy in the Eurozone, in particular. Structural convergence also has an impact on the resistance of the economies of the member countries to the emergence of exogenous shocks which have the potential to influence adversely their entire development. The state of convergence itself in the structures of the economies depends largely on the quality of the existing institutional environment and the effectiveness of the economic regulations. These, on their part, are both affected by the integration process and influence its future development and advancement. This is why the implementation of the economic, and in particular, the structural convergence necessitates the convergence of the economic institutions and regulations, as well as the justification and introduction of a targeted macroeconomic policy related to overcoming structural dissimilarities. This subject matter is particularly topical in Bulgaria considering the country's participation in the EU's Exchange rate mechanism (ERM II) and subsequent Eurozone membership.

The predominant part of the existing empirical research of structural convergence and institutional quality is conducted separately for each of them and includes comparisons between different groups of countries (Wacziarg, 2004; Palan & Schmiedeberg, 2010; Bolea et al., 2018; Schönfelder, 2017; Schönfelder & Wagner, 2019; Pérez-Moreno et al., 2020; Lyeonov et al., 2020). These are based on the use of specific indicators constructed at different levels of aggregation. The available individual country studies are relatively rare and concern specific convergence characteristics in the structure of the economy and in the quality of the institutions without explicitly analyzing the interdependencies between them (Pietrzak & Balcerzak, 2017; Chilian et al., 2016). Bulgaria is included in some comparative analyses of the economies of the new EU member countries where certain aspects of structural convergence gauged through the divergence and diversity indices are interpreted (Stattev & Raleva, 2006; Velichkov & Damyanov, 2021). However, there is no specific country study that focuses both on the analysis of the structural convergence and on the institutional quality. This is the reason why the aim of the current paper is to analyze the structural convergence of the Bulgarian economy with the Eurozone, the institutional quality in the country and their interdependence in the 2000–2018 period.

The evaluation of the structural convergence here is based on the relative shares of the components of the gross value added (GVA) and employment through the use of two indices of heterogeneity—the Krugman specialization index and index of inequality in productive structure. In contrast to another study conducted with a similar methodology by Raleva (2021) the construction of the aggregate structural indices is not based on key economic sectors but on A*10 industry breakdowns by Eurostat. As far as the institutional quality is concerned, the current paper provides an evaluation through the indicators for government effectiveness and the regulatory quality.

The paper is structured in the following way: The first part focuses on presenting concisely the main conclusions of the theoretical and empirical studies into the

structural convergence and the institutional quality. The second part describes the used empirical data and the applied research methodology. The third part is an empirical analysis of the convergence in the structure of GVA and employment in Bulgaria relative to the respective structures in the Eurozone. The fourth part is centered around the study of the government effectiveness and the regulatory quality in the country, as well as their relation to structural convergence. The final part sums up the most important conclusions based on the empirical analysis.

2 Theoretical Bases

Structural convergence is broadly defined as the process of converging the economic structures of individual countries which can have various dimensions, can be provoked by different reasons and to have a considerable impact on the entire development of their economies. The economic structure, in its turn, refers to the content and the relative importance of the individual components of the most important macroeconomic aggregates. Along these lines, the process of structural convergence is related to changes in the relative share of the respective components in a particular country or to the dissimilar changes in the relative share of the components for the compared totality of countries, i.e., the implementation of the structural changes in the economy or the economies.

The prevalent part of the existing theoretical and empirical studies of the convergence in the economic structures is related to the enlargement of the Eurozone and the joining of countries from Central and Eastern Europe which feature very different production structures and demonstrate differences in the degree of flexibility on the labor market. Their specific characteristics are the reasons why the Eurozone drifts away from the principles of the optimum currency area and pose the question about measuring the degree to which the dissimilarities in the economic structures can be minimized. The structural convergence itself is in a complex two-way interdependence with the entire development of the integration process. On the one hand, it can be perceived as a natural consequence from the deepening integration and the resulting changes in the territorial distribution of production and in the specialization or diversification of the economies in specific productions and activities (Palan, 2013; De Grauwe, 2009; Krugman, 1991). On the other hand, structural convergence is of particular importance to the members of the integration community due to its impact on their further convergence, as well as the prospects for their individual development in all aspects. This is particularly relevant to the monetary integration and the transition to the final stage of the European Economic and Monetary Union (EMU) whose results largely depend on the convergence of the economic structures between the EU individual countries as a whole or the Eurozone.

Structural convergence features several essential dimensions which determine different characteristics of the economic structure and its dynamics. The most important one is the convergence in the industry structure of GVA and/or the

industry structure of employment (Wacziarg, 2004; MPC task force of the ESCB, 2004; Angeloni et al., 2005; Höhenberger & Schmiedeberg, 2008; Imbs, 2000; Raleva & Damyanov, 2019). The majority of available publications explain its importance by making the assumption that the changes in the production structure can significantly influence the results of the implemented monetary policy. This impact of the changes in the structure of the value added and the employment can be observed in the impact they have on the transmission mechanisms of the monetary policy and the general price level. In a similar but broader context, structural convergence is seen as a prerequisite for higher resistance of national economies to diverse exogenous shocks. This is why the convergence in the production structures of economies is considered to be a key indicator for their structural convergence and in some analyses it is defined even as a benchmark for the evaluation of the degree of economic development.

A number of theoretical and empirical studies outline the understanding that the structural convergence is definitely connected to the quality of the existing institutional environment (Rusek, 2016; Savoia et al., 2010; Marikina, 2019). To disclose the logic of such an assertion an accurate analysis of the quality of this environment is needed and some criteria have to be met (Popescu, 2012). The first criterion is universality (Kasper & Streit, 1998), which implies general, open, abstract social rules or as Hayek (1937, p. 50) puts it rules that must be “applicable to an unknown and indeterminable number of people and circumstances.” The second criterion stems from the main function of institutions, the reduction in transaction expenditure and the uncertainty of human interaction, which thus guarantees a high level of safety and stability in the economic and social relations. Therefore, institutions have to be credible and stable, transparent and easily identifiable. Another criterion is adaptability or the institutions’ ability to anticipate changes and offer socioeconomic incentives for agents, in order to facilitate adaptation to the new socioeconomic conditions.

The quality of the existing institutional environment (institutional quality) is particularly important because along with structural convergence it plays a crucial role in achieving the final goal—economic development. It could be hypothesized that the institutional quality is the best indicator of structural development and wealth creation in the long term for a nation. In the first place, the quality of the institutional environment should be seen as the main requirement for economic success and long-term progress, as a variable impacting structural convergence and economic development it intends to stimulate. In the second place, institutional quality consists of a wide range of factors, some of which are difficult to gauge. Literature provides a selection of indicators for a similar purpose, as in Easterly et al. (1992), and in more recent studies by Kunčič (2013), Fabro and Aixalá (2013), and Bruinshoofd (2016). To provide objectivity, it is recommended that these indicators be based on publicly available and representative data. To achieve that goal the analysis of the institutional quality is based on two key indicators—government effectiveness, which is used to track the most essential institutional improvements or deterioration over time and the regulatory quality, which makes it possible to consider the ability of the government to formulate stable policies and regulations.

What is meant by government effectiveness is the achievement of quality of public services, capacity of government institutions, independence of political pressure, quality of formulated policies, and in this way to create favorable environment for private investments. The idea behind regulatory quality lies in the ability of the government to implement sustainable policies and regulations which facilitate encouragement and development of the private sector and in this way to establish uniform rules for economic commitment.

3 Data and Methodology

The analysis of the structural convergence of the Bulgarian economy with the Eurozone is based on the use of annual data about GVA and employment in Bulgaria and the Eurozone-19 based on data provided by Eurostat. The evaluation of the structural convergence itself is based on the computation of two indices of heterogeneity of the economic structure—the Krugman specialization index and the index of inequality in productive structure (Krugman, 1991; Cuadrado-Roura et al., 1999; Palan, 2013). The Krugman specialization index (KSI) is calculated by the formula:

$$KSI = \sum_{i=1}^n |S_{BGi} - S_{Ezi}| \quad (1)$$

where S_{BGi} is the relative share of industry i in the total GVA or the total employment in Bulgaria, S_{Ezi} is the share of the same industry in the respective indicators for the Eurozone, while n is the number of industries. The minimal value of this index is 0 and the maximum value is determined by the formula $2(n-1)/n$, which at A*10 industry breakdowns by Eurostat equals 1.8.

The index of inequality in productive structure (IIPS) is calculated in the following way:

$$IIPS = \sum_{i=1}^n (S_{BGi} - S_{Ezi})^2 \quad (2)$$

where the difference with the previous index is only in raising the respective deviations to the second degree. This difference leads to a stronger sensitivity of the indicator due to its stronger dependence on the structural component with the most drastic change. Its values can vary between 0 and $(n-1)/n$ with the maximum value in this case of 0.9.

The higher values of the two indices illustrate significant differences in the structures of the GVA and employment by industries in Bulgaria and the Eurozone, whereas their zero values indicate complete identity. Considering the adopted

definition of structural convergence, it will be viewed as justified when there is a declining trend in the used indices with statistically adequate trend models.

To characterize the institutional quality, annual data about Worldwide Governance Indicators (WGI) provided by the World Bank have been used. Appropriate information about the empirical analysis provides the percentile rank, i.e., the rank of the country by the government effectiveness and regulatory quality indicators. It should be taken into consideration that the 0 value of the two indicators corresponds to the lowest rank, while 100 shows the highest rank of the country among all countries included in the World Bank survey.

4 Structural Convergence of the Bulgarian Economy

4.1 Convergence in the Structure of GVA

During the period under consideration the deviations in the structure of GVA of Bulgaria from that of the Eurozone, expressed via the KSI, were relatively moderate with the most significant deviation of 0.29 in 2016 amounting to 16.1% of the maximum possible value (see Fig. 1a). Irrespective of this, during most years there was a process of narrowing the gap between these differences which occurred with varying intensity. The most significant drops in the index were reported in 2005, 2012, and 2017–2018 with the maximum value of 0.24 reached during the first 2 years of the entire period. In 2005, it was due mostly to the reduction of the relative share of agriculture, forestry and fishing, and the real estate activities, as well as the increase in the share of construction in the GVA of Bulgaria. The drop in the relative

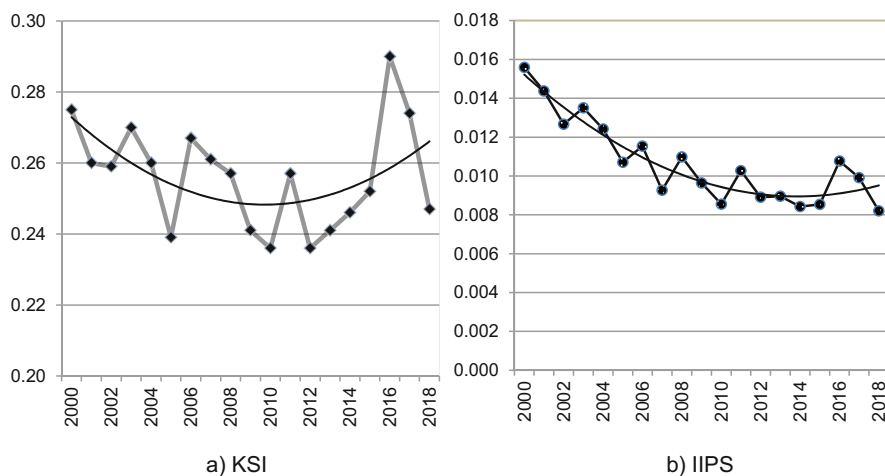


Fig. 1 Convergence in the structure of GVA. (a) KSI, (b) IIPS. Source: Own work based on Eurostat, 2020

share of financial and insurance activities contributed significantly to the decline in the index in 2012 and in 2017 and 2018—it was due to the decline in the share of industry (except construction) and the increase in the share of professional, scientific, and technical activities; administrative, and support service activities.

More noticeable deviation from the GVA structure in the Eurozone was reported in 2006, 2011, and 2016, reaching the highest increase in the index of 15% in the latter. It was caused mainly by an increase in the relative share of industry (except construction), followed by a drop in the share of professional, scientific, and technical activities; administrative and support service activities and an increase in the share of the information and communication industry. A significant part in the climb in the index in 2006 was played by the increase in the relative share of wholesale and retail trade, transport, accommodation, and food service activities and in 2011—by the increase in the relative share of industry (except construction).

Despite the distinct changes in the KSI by years, its level at the end of the period amounted to 0.25 which is nearly 11% lower in comparison with the start of the period and is 13.9% of the theoretical maximum for this index. This can be interpreted as a sign of the existence of a convergence process of the economic structure which, however, is not evidenced when defining the trend for the period as a whole. In the process of modelling, the trend models with linear, exponential, and polynomial trends were tested and the second-degree polynomial model was determined to be the most appropriate option. The technical characteristics of the model, however, predetermine the insufficient accuracy of the results which does not allow the formulation of a definite conclusion concerning the availability or the lack of convergence in the structure of GVA.

Considering the methodological peculiarities of the IIPS, its values are traditionally much lower and in Bulgaria they vary between 0.016 and 0.008 (see Fig. 1b). The most substantial deviation from the structure of GVA by economic industries in the Eurozone was registered in 2000 when the index was just 1.8% of its theoretical maximum. During nearly two-thirds of the period it was going down, marking the most dramatic decline in 2004, 2007, and 2018. During the rest of the time, the structural differences with the Eurozone grew and their most significant growth from 0.009 to 0.011 was reported in 2008 and 2016. In 2018 the index of inequality in productive structure reached its minimal value which was by 50% lower compared to 2000 and was below 1% of its possible maximum.

By analogy with the Krugman index, different trend models are also tested here and the preferences are for the second-degree polynomial model. Unlike the previous case, however, the results from the current model are considered reliable which makes it possible to discuss them. They are indicative of the clearly unfolding process of convergence in the structure of GVA by industries until 2013, followed by keeping the gap during the next 3 years and even by a slight divergence at the end of the period.

4.2 Convergence in the Structure of Employment

The differences in the structure of employment by industries are greater than those in GVA which can be evidenced by the two indices. The mean value of the KSI for the period was by nearly 70% higher than the mean value of the same index for the structure of the value added (see Fig. 2a). During the first year, this index was 0.49 and represented 27.2% of its potential maximum. The period between 2001 and 2002, characterized by opposite index changes was followed by a 7-year period during which structural differences narrowed and there was only one exception—the year 2008. During most of the years over the period the convergence with the structure of employment with the Eurozone was predominantly the result of the decreasing relative share of agriculture, forestry, and fishing and of increasing relative share of construction and of wholesale and retail trade, transport, accommodation, and food service activities. During the rest of the period, the index changed negligibly in different directions and in 2018 it reached its minimum of 0.42, recorded also in 2009 and 2012–2016. This value was by 14.3% lower than the one registered in 2000 and amounted to 23.3% of the theoretical maximum value of the index.

Based on the IIPS the gap in the structure of employment in Bulgaria relative to the Eurozone was also bigger than that in the structure of the value added and considerably exceeded the reported one as measured by the previous index (see Fig. 2b). Its values varied between 0.050 and 0.038, i.e., between 5.6% and 4.2% of the theoretical maximum of the aggregate differences which are on average 3.8 times higher than the mean value of the same index for GVA. Their dynamics showed some similarity with the trend of the KSI until 2007 and certain specifics after that.

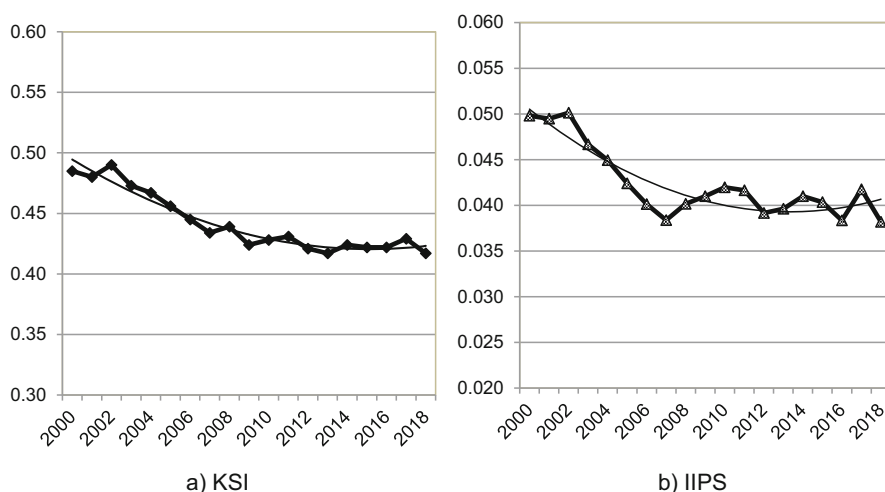


Fig. 2 Convergence in the structure of employment. (a) KSI, (b) IIPS. Source: Own work based on Eurostat, 2020

These specifics relate to longer periods of growing differences as well as the lack of intervals with constant index values.

Modelling the trends of the two indices when evaluating the structural changes in employment is again done by using the second-degree polynomial. Unlike the previous case, both models here are sufficiently accurate which facilitates the interpretation of the results. They show that during the first two-thirds of the period under consideration the structure of employment in Bulgaria converged with the respective structure in the Eurozone, whereas after that the differences between them were preserved.

5 Government Effectiveness and Regulatory Quality in Bulgaria

Tracing the data from 2000 until 2018 for each of the two indices—government effectiveness and regulatory quality, a pretty accurate evaluation of the individual components can be made and consequently—the quality of institutions in the national economy can be compared.

5.1 Government Effectiveness

When evaluating the institutional quality via the government effectiveness criterion it can be pointed out that there is an improvement in the quality of the public services, the capacity of the government institutions, the independence from political pressure and the quality of the formulated policies. When comparing the starting year 2000 and the end year 2018 of the period under consideration, based on data provided by the World Bank, it can be seen that the effectiveness of the government decisions was improved and its value increased from 56.4103 to 62.9808 (see Table 1). Some uncertainty related to this criterion can be seen in the years immediately before, during, and after the global financial and economic crisis.

When comparing the data about government effectiveness and the structural convergence of the Bulgarian economy it becomes clear that there is a positive interdependence throughout the entire period. As far as the interdependence during the different stages of the period is concerned, it is clear that the changes in government effectiveness preceded the changes in the GVA and employment structures. The indicated specific feature could be perceived as an indication that the process of structural convergence is influenced by the dynamics in the quality of institutions since the government effectiveness has impact on the distribution of production and employment among the industries.

Both the achieved and the unattained results in a given government program and activity are assessed as an illustration of government decisions aiming at efficiency.

Table 1 Government effectiveness

Year	Rank
2000	56.4103
2002	63.7755
2003	62.2449
2004	63.0542
2005	60.7843
2006	54.6341
2007	53.8835
2008	53.3981
2009	59.8086
2010	59.3301
2011	60.1896
2012	60.6635
2013	59.7156
2014	57.6923
2015	61.0577
2016	64.9038
2017	63.4615
2018	62.9808

Source: World Bank, [2020](#)

Their accurate measurement is based on data provided by independent bodies such as the Bulgarian National Audit Office whose main duty is to control the reliability and credibility of the financial statements of the budget enterprises, the legal, economic, effective, and efficient management of public resources and activities, as well as providing the National Assembly with credible information.

It is possible that government success is defined as lack of failure. Every government activity, program, or initiative whose management does not show any signs of failure, is perceived as success for the Bulgarian government. If there are partial signs of failure or success, government programs remain unclassified, which is done in order to distinguish clearly and unambiguously the successes and the failures, especially when there is insufficient information about each audited activity. The impartial evaluation and the presentation of good managerial practices of the Bulgarian governments which lead to effective government decisions, can be substantiated by several successful cases, mentioned in the reports of the Audit Office by category—Government Budget and Financial Policy, Foreign and Interior Affairs, Security, Education, Science, Sport, Culture, Media, Environment and Agriculture, Management of EU Funds, Economy and Energy, Regional Development and Transport, etc. The categories mentioned above include all institutions, policies, and participants in the economic and social life in Bulgaria which are closely related to evaluating the effectiveness of government decisions and therefore—the results of their overall importance.

5.2 Regulatory Quality

The second indicator of institutional quality—regulatory quality, also marked a considerable improvement according to data provided by the World Bank about Bulgaria. This suggests that for the period starting 2000 when the value of the indicator was 60.0000 until 2018 when it reached 72.5962 the government’s ability to provide stable policies and regulations which facilitated and encouraged the development of the private sector improved. Even in the first years after the global economic crisis, the response of the institutions was quite adequate which resulted in registering a value of 74.1627 in 2010 (see Table 2).

The improvement of the regulatory quality for the period as a whole turned out to be positively connected with the process of structural convergence. What is more, by analogy with the previous indicator, the specific changes in the structure of the economy usually follow those in the quality of institutions. Since the changes in the regulations mostly concern some of the industries with the highest dynamics in GVA and employment, the dynamics in the economic structure of Bulgaria can be perceived as dependent on the dynamics of the regulatory quality.

For Bulgaria in particular, this means that for the period from 2000 until 2018 the institutional quality was guaranteed with events that encourage economic activity and reduce the economic limitations in the activity of the economic entities. The improvement of the regulatory quality suggests that the issues related to improving regulations in order to provide protection of public interests were resolved. This, of course, is done in a way that supports rather than hinders the development of the

Table 2 Regulatory quality

Year	Rank
2000	60.0000
2002	69.8980
2003	69.8980
2004	72.4138
2005	69.1176
2006	68.1373
2007	70.8738
2008	72.8155
2009	72.7273
2010	74.1627
2011	70.6161
2012	69.6682
2013	68.2464
2014	70.6731
2015	70.6731
2016	73.5577
2017	72.5962
2018	72.5962

Source: World Bank, [2020](#)

economic activity of the entities. Going back in time illustrates the will of the EC which set a goal to reduce the administrative burden by up to 25% by 2012 and urged the member countries to set national goals to reduce the administrative burden, resulting from the national legislation, until October 2008. In order to do that, Bulgaria introduced “Program for better regulation 2010–2013” which was developed and later updated to achieve the goals and tasks set in the “National Reform Program 2008–2010.” The principles applied, and which have to be further pursued, aim to clearly formulate the goals and measures, improving transparency when drafting legal acts, introducing administrative regulation, implementing the programs with minimal costs within the planned annual budget funds of the institutions, placing “final consumers” at the heart of the process of developing policies by understanding their needs and taking into consideration their ideas, etc. The constant efforts of the government resulted in the implementation of the programs undertaken and led to providing opportunities for businesses by reducing the impact of the bureaucratic requirements, planning the effect of regulation, guaranteeing equal opportunities for economic activity and conditions for better competition, stimulating the participation of entities in the national economy.

6 Conclusion

The results from the empirical analysis show a well-defined structural convergence of the Bulgarian economy with the Eurozone during the first 2/3 of the period under consideration, followed by a period of holding back the differences. In the case with the structure of employment, this can be evidenced by the KSI and by the IIPS, whereas in the case of the GVA—just by the second index. The changes in the economic structure in the majority of the cases are a consequence of the changes in the relative shares of agriculture, forestry, and fishing; construction; industry (except construction) and of wholesale and retail trade, transport, accommodation, and food service activities. The degree of structural deviation from the Eurozone is more significant in employment and the bigger discrepancies with the structure of GVA were reported on the basis of the IIPS. The dynamics in the structural characteristics of the national economy for the entire period matches and benefits from the increase of the institutional quality in the country. This can be further evidenced by the changes both in the government effectiveness and the regulatory quality which usually precede those in the structure of GVA and employment. This, in its turn, implies that the further strengthening of the convergence process as a whole and of the structural convergence, in particular, will require that constant efforts should be made to improve sustainably government effectiveness and the quality of the regulatory framework.

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The Latin Monetary Union, the Treaty of 1885 and the Liquidation Clause: The Difficulty to Leave a Monetary Union



Andrea Filocamo

Abstract In 1865 the LMU was founded by four countries (France, Belgium, Italy, Switzerland, to which Greece joined two years later). It was based on a bimetallic system and experienced a crisis in the Seventies due to a loss in the value of silver. Therefore, at the conference of 1885 for the renewal of the Convention, France asked to insert a clause in the new Treaty for the liquidation of the silver 5-francs coins (ecus), according to which, in case of break-up, each country undertook to redeem their ecus against gold. This measure would have hit especially Belgium and Italy that, however, during the conference, chose different strategies. Belgium fought to avoid the liquidation and abandoned the work of the conference, but was forced later on to accept the liquidation clause; Italy, instead, decided not to oppose the request despite the financial burden that would have resulted and achieved all the set objectives. What emerges is that in a monetary union it is difficult to balance the various interests involved in it, that it is difficult to leave a monetary union (as we have recently seen with the case of Greece in 2015), and that the power relationships and the diplomatic skills are often more decisive than law situations. For economic history, the Treaty of 1885 confirms the refusal of the concept of representative money, whose value does not depend on its own material substance but on a decision of the state.

Keywords Latin Monetary Union · Liquidation clause · Bimetallism · Representative money · Subsidiary coins

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1 Introduction

History shows that a monetary union's break-up usually follows traumatic events and/or materializes when the member States have no more interest to continue it, as long as the decision does not implicate costs to bear. World War I, for instance, determines the break-up of the Austro-Hungarian monetary area and, indirectly, of Latin and Scandinavian monetary unions; colonial monetary Unions end when colonies achieve independence, as in the case of the English pound in Western Africa; the fall of USSR in 1991 determines the break-up of the rouble area (Praussello, 2010; Bordo & Jonung, 1999).

Instead, Czechoslovakia in 1993 represents a case of pacific dissolution of monetary union, when it is acknowledged the political rift between the Czech region and Slovakia not allowed to have a single currency (Fidrmuc et al., 1999). In this regard, the Latin Monetary Union is paradigmatic: born in 1865, between the Seventies and Eighties, it saw already arise disputes between member States, while the bimetallism crisis marked its substantial failure; however, the union went ahead with no practical purpose other than avoiding the costs of its break-up. The literature on this subject is wide: we recall here Willis, 1901; Brossault, 1903; Marconcini, 1929; Fourtens, 1930; Dubois, 1950; Redish, 1994; Flandreau, 1994, 2000; Pecorari, 1999; Einaudi, 2001; Bae & Bailey, 2011 and recently Filocamo, 2017.

After World War I and the adoption of fiat money in all the member States, the LMU gradually lost meaning until its dissolution in 1927. Actually, the Treaty of 1865 regulated the procedures for the dissolution of the union and also a final term for it in 1880, which would have materialized only if a member State has been denounced it one year before the same limit. Otherwise, it shall remain obligatory during a new period of fifteen years and so on (Treaty of 1865, art. 14). The rules to be followed in case of dissolution were substantially limited to the redemption of subsidiary silver coins issued, the only ones with a real value below their face value. Each government undertook to redeem them against an equal value of the current coin (gold or silver 5-francs pieces, the ecus) in two years from the expiration of the treaty (art. 8). The change in conditions on the precious metal market determined an overvaluation of ecus too and required a review of the rules, on which an agreement was reached, with difficulty, in the Conference of 1885. The liquidation clause of the silver 5-francs pieces was introduced after a difficult discussion between delegates that brought Belgium to abandon the work of the Conference for being subsequently forced to come back to have not to bear the costs of its defection.

We propose to analyze what happened during the Conference, describing before the terms of the problem of the liquidation clause (Sect. 2), the different positions of the member States and the behaviour of the delegates, particularly Pirmez for Belgium and Luzzatti for Italy (Sect. 3), the epilogue of the story with the abandon of the conference and the subsequent readmission of Belgium (Sect. 4) and then the conclusions (Sect. 5).

Overall, what emerges is the difficulty to balance the various interests involved in a monetary union, as well as the fact that the power relationship and diplomatic skills are often more decisive than law situations. In this regard, Italy was well represented by a delegation led by Luigi Luzzatti, which defended the Italian government line, achieving all the set objectives.

This story also shows how difficult it is to leave a monetary union: in this case, Belgium was forced to accept the liquidation clause, despite this latter cannot be based on the law situation depending on previous agreement; the exit would have meant heavier and immediate costs.

2 The Liquidation Clause: The Terms of the Problem

The Convention of 1865 provided the event of a dissolution of the LMU. Art. 14 provided the tacit renewal in the absence of denunciation by a Member State one year before its expiration, on 1 January 1880. Art. 8 provided, in case of dissolution, that the only obligation was that each country repatriates subsidiary silver coins that had been issued and circulated in the other member States, repaying them in gold or ecus. The reasoning of this disposition was that subsidiary coins had partially fiduciary character, and therefore overvalued, because they issued at a lower fineness (835‰ instead of 900‰ as the ecus of full fineness): once the union was dissolved, it was fair that these coins returned to their country. This measure did not concern the ecus: the stability in the ratio of gold–silver in the previous years did not suggest that things could change. Conversely, already in the Seventies, the decline in the price of silver resulted in an overvaluation of the ecus too, that they tried to tackle in the agreements of 1874-75-76. The measures taken to this effect were essentially limitations at issues of ecus. In reality, especially Italy obtained permission to mint an additional quota of ecus (Filocamo, 2017).

France has already raised the matter in the Conference of 1878 because an excessive quantity of silver coins of other States circulated in its territory with a market value as bullion lower than its legal value. They were especially Italian ecus, due to the presence of inconvertible paper money (*corso forzoso*) in Italy.

Therefore, French delegates asked the insertion of a liquidation clause also for the ecus to be repatriated against gold in case of dissolution of the union. The measure would have hit Italy, but on that occasion, Italian delegates managed to avoid it, undertaking to repatriate the divisionary coinage and abrogate the *corso forzoso*, considered as the main cause of migration of the ecus. Thus, the new Convention continued not to provide the liquidation clause. Italy, for its part, honoured its commitments, redeeming its divisionary coinage and abolishing the *corso forzoso* long before 1 January 1886, the expiration date of the new Convention. However, the collapse of the silver price continued, and Switzerland, where the ecus of Member States flowed in large quantities, as in France, took the initiative to denounce the Convention before its expiration.

This time the question also concerned Belgium, provided that especially France complained about the flow of Belgian ecus, as well as Italian, in its internal currency and considered absolutely essential the inclusion of a clause liquidation also for the ecus. This problem, internal to LMU, emphasized the main disadvantage of each bimetallic monetary system, namely the event of a variation in the ratio gold–silver on the market. For the Gresham’s law, in effect, the coins of the metal appreciating tend to get out from the circulation and, in a monetary union like the LMU, this happened two times: not only was the “bad” silver money drove out from circulation the “good” gold money; in Italy, the silver coin results “good” compared with the banknotes at *corso forzoso* that until 1883 had met the needs of the circulation, and for this reason, it was pushed towards the other countries of the Union.

At the Conference of 1885, Italy and Belgium apparently shared the same interests, but they were divided on the line to follow. The Belgian diplomacy fought to avoid the insertion of the liquidation clause, considering unfair to suffer the repatriation of the ecus after the country had complied strictly with the rules of the Union for its full duration. The line adopted betrayed, perhaps, the intention of leaving the monetary union to reorganize its monetary system on the gold standard (Willis, 1901). This may explain the rigidity of Belgium and its readiness to take some risk for the sake of moving towards the gold standard, even though the delegates often stated the relevance of the Union and the will to remain in it.

Italy, instead, decided not to oppose the request despite the financial burden that would have resulted. The position of Italy, immediately clear in the direction of the acceptance of the liquidation clause, deserves further explanations.

The monetary conference was prepared carefully, as testified by the institution of a Governmental Committee in 1883 or the truly clear instructions that Minister Minghetti had given to Italian delegates in March 1885. Some moves had prepared the ground: already in February 1881, the Chamber of Deputies adopted a decision establishing that foreign silver coins shall not even be received in the public treasuries after 1 January 1886, that is to say from the expiration of the monetary treaty of the Latin Union if not renewed; moreover, a decree of 1883 established that at least 2/3 of the bank reserves should consist of gold and only 1/3 of silver. The decree was intended to defend the gold stock (Fratianni & Spinelli, 2001).

The meaning of these provisions was to limit the inflow of ecus from abroad to prevent potential problems that would have arisen from the breakdown of the Union. It would be wrong, instead, to interpret them as the government’s intention to put an end to the Union as Cernuschi (1884), since the interest of the Italian government was exactly the opposite. It was a kind of message to France that, in the absence of agreement and with the ending of the Union, it would have had difficulty in repatriating Italian ecus through the normal market ways. The Italian measures, therefore, strengthened France’s intention to renewing the Convention (to avoid their silver coins went out of validity in Italy) but inserting the liquidation clause to protect itself. Indeed, it might seem strange that Italy did not decide to oppose as in 1878, by relying on previous agreements, also taking into account that joining forces with Belgium would strengthen its position.

On the one hand, the desire to not increase the tensions with France may have played a role in a phase in which the relationships between the two countries were no longer as friendly (remember the humiliation for Italy when Tunisia was added to the French Empire and, by Italy, the secret arrangements with Austria and Germany), especially at the moment of discussion of trade treaty between the two countries, that would be completed in 1886. On the other hand, Italy had another interest to take back the ecus: with the abolition of the *corso forzoso* in 1881, in fact, Italy had taken a loan in silver and gold to be used for recall a part of the Consortium notes. The remaining part was replaced by State notes, convertible on delivery, but that had to be gradually withdrawn. For this purpose, metallic money was needed so that promoting its gradual repatriation could be useful to the government. Obtaining a new four-five years convention coincided with the aim of withdrawing the State notes within 1889.

From this perspective, the Italian conduct appears understandable: following the line of the stronger country, France in this case, seeking to profit from the attitude of Belgium, leaving to this latter the responsibility of dirtying their hands (De Cecco, 1991). This choice is also made evident in reply to Belgian request to extend the Convention by one year to reach afterwards an agreement about liquidation. Luzzatti states that the Italian government would join the request but believes it should adapt to the decision of France.

The Italian choice was rewarded. Belgium abandoned the Conference but later was forced to re-enter in the Union to avoid paying the costs of the repatriation of the ecus immediately. However, it obtained more favourable conditions that also Italy could have enjoyed.

3 The Conference of 1885: Pirmez Versus Luzzatti

Monetary Conference of 1885 opened with the session of 20 July and ended with the 17th session on 12 November of the same year. This was probably the phase more difficult in the history of the Union, with Belgian delegates that abandoned the Conference in the sixth session of 1 August. Following the signing of the Convention on 6 November 1885, the Additional Act of 12 December 1885 marked the return of Belgium in the alliance, with a liquidation clause with more lenient conditions.

In the third session of 23 July, the issue of liquidation was dealt with. The discussion took place on two different levels that tended to blend: the first one was the monetary theory, about which Belgium had good reasons; the second one was the realpolitik and, given the power relations between member States, Belgium was destined to succumb.

The Belgian delegation was led by Pirmez: his arguments to reject the liquidation clause were based on theoretical and regulatory assumptions, on the precedent of the Conference of 1878, and on unfair consequences that the clause would involve.

Under the first aspect, the liquidation clause would conflict with the UML double standard system: in it, gold and silver should have the same legal validity; therefore the creditor cannot claim to be paid in gold. As Pirmez affirms (Conférence, 1885, p. 32): “The very essence of this standard is that the debtor has the right to discharge himself as he pleases in gold or silver; the debt is always alternative. It is enough to say that the creditor is obliged to receive gold or silver, but he do not have the right to exchange with one another.”

The double standard had as a consequence that the currency was essentially made by depreciated metal, but there was not a right to exchange it with the other metal. Imposing the repatriation of silver ecus, with full fineness, against gold would distort the essential nature of bimetallism. Pirmez’s reasoning is unassailable: the liquidation clause would implicitly and definitively sanction that the Latin Union was no longer based on a bimetallic system but the gold standard. We also notice incidentally that if the value of a full fineness coin, as the silver ecus, should change according to the value of the precious metal contained in it, we are faced with commodity money: the liquidation clause will confirm the nineteenth century concept of money as commodity money. Also, the Convention of 1865 was permeated with this idea, despite there was a trust-based element in the overvaluation of the divisionary coinage, for which, however, the liquidation was provided. It does not seem that this remark affects the validity of the point of Pirmez. His argument may be dictated by the defence of national interests, but has modern implications laying bare the contradictions of the concept of commodity money, especially in a bimetallic context.

Under the regulatory level, as we have seen, there was no legal obligation to liquidate the full fineness of silver coins. The member States were only obliged by the Convention of 1865 to ensure the weight and the fineness of the principal coins. Also, the wear of the coins fell on the private to the point that the French delegate Ruau rejected the possibility that worn-out ecus below the provided tolerance limit were to be withdrawn by the State. Simply, they were no longer accepted as payment. *A fortiori*, the government could not be held responsible for the loss in value of the metal of the coin it had minted (Conférence, 1885, p. 33.)

Also, in this case, Pirmez’s argument appears reasonable: if the wear of coins naturally occurs over time and is unavoidable in the long run, the loss in value of the precious metal is a mere possibility. If the State is not responsible for the former, even more, so it should not be accountable for the latter. Conversely, the Convention considered the Member States responsible for their divisionary coinage, because from the outset, overvalued. From this, *a contrario*, such a responsibility could not exist with silver ecus. In this respect, actually, it could be argued to the contrary: the obligation to liquidate divisionary coinage resulted from the fact they were in themselves overvalued; at the time also the ecus became overvalued, even after unforeseen events, an interpretation by analogy could lead to applying the liquidation also to them, once again in a manner consistent with the idea of commodity money.

The new Convention, in fact, in addition, to insert the liquidation clause, will provide, consistently with the latter, also the responsibility of Member States for the

wear of their silver ecus (art.3). In that way, the intrinsic value of the coins was recognized, and the responsibility of the State for their depreciation tended to be introduced. Also, in this case, the idea of commodity money prevailed.

In the second part of his speech, Pirmez reminded the precedent of the Conference of 1878, when France requested to include the clause liquidation in the new Convention to protect itself against the risks arising from the adoption of the *corso forzoso* (i.e., fiat money) in Italy. In fact, this measure—contrary to the spirit of Union if not to the rules—determined the inflow of silver coins from Italy to allied countries, especially France. On that occasion, Pirmez recalls, everyone agreed that there was no obligation for Italy. The Swiss Feer-Herzog had stated that in 1865 it would not have been logical to provide the liquidation also for full fineness coins, as the ecus, but precisely the presence of the fiat money in Italy raised the problem. This was the real distinction at that time, and also the President of Conference of 1878, the French Say, concluded that Italy had caused an injury to the other countries by adopting the *corso forzoso*. So, if this latter had been in force on the expiry of the Convention, it would have been right to request the redemption of the devalued coins. Moreover, President Say stated that demanding something due to the difference of standard would have been against the bimettallist idea. At that time, the liquidation clause was put aside, and Italy undertook to repeal the *corso forzoso* and repatriate only silver divisionary coins, as the original Convention provided. No one would understand why the liquidation clause was not introduced when there was the reason for it (the *corso forzoso* in one of the Member States) and should be introduced nowadays when this reason no longer exists.

This is, perhaps, the weaker part of Pirmez's speech: the problem, in fact, did not stem simply from the *corso forzoso*, but also the devaluation of the silver already evident in 1878 and that the fiat money amplified. This is demonstrated by the fact that the problem persisted even after Italy abrogated it since there still was a large number of Italian ecus in France, to which were added the Belgian ones. Nevertheless, in that Conference all requests for the liquidation clause were based exclusively on the existence of *corso forzoso* in Italy, and Pirmez was able to recall it in the Conference of 1885.

Finally, according to Pirmez, the liquidation clause would have been contrary to principles of fairness. Introducing it might have meant to insert a clause contrary to the pact already signed and to punish exceedingly a country as Belgium that had always observed the rules. Ecus minted in Belgium were used by other countries, especially France and Switzerland, where they flowed in exchange for goods. The only way to carry out the liquidation was free trade: it would have taken place when the course of trade balance changed direction in favour of Belgium. But until then, France should have enjoyed the external account surplus and accepted the slight disadvantage of money overhang. Pirmez thus introduced the concept of natural liquidation: each country is responsible for its money only in the sense that it must be accepted as payment, even if devalued, but it cannot be required to reimburse it in gold or money of the creditor country.

Pirmez's arguments appear convincing. Nevertheless, Belgium found itself alone to defend its positions, because even Italy, as already said, supported the French

approach, although the liquidation would have penalized it. In his speech, the Italian chief delegation, Luzzatti, did not contest the assertions of Pirmez on the theoretical level but in concrete terms. It was true that the liquidation clause would have distorted the Latin Union, but the bimetallic nature of the Union had already faded when it was decided to limit and then suspend the issue of silver coins in the Seventies. That implicitly acknowledged that silver coins did not have the same value as the gold ones, although the legal value was equal: the Union had simply recognized the changed conditions of the precious metals market, adjusting its decisions accordingly. By prohibiting free coinage of silver and reserving the right to issue the ecus, the Member States had implicitly accepted the responsibility for their coins, also the already existing ones. For this reason, according Luzzatti, it was right that each country was also responsible for the wear of the ecus. In brief, Pirmez's argument led to the irresponsibility of States, whereas that of Luzzatti led to their responsibility: they had to guarantee the value of the issued coins.

Luzzatti added that if there were no formal obligation for a country to redeem its coins, however, it was true that they were not discussing the convention in force but the convention to be approved. At that point, Luzzatti, abandoning any theoretical or legal consideration, made a realistic statement (Conférence, 1885, p. 52): "If Belgium is, so to speak, one of the brightest jewel of the monetary union, France is the indispensable basis of it and without France there is no longer Latin Union."

This explained clearly the Italian attitude: the refusal to insert the liquidation clause in the new convention would have encountered the opposition of France, the leader country in the union. This could have brought to its dissolution, which was considered a possibility to avoid.

In the subsequent session, Luzzatti addressed the point of the Conference of 1878, reminding that on that occasion, Pirmez seemed to be in favour of the liquidation. In fact, the Belgian delegate considered Italy responsible because of the *corso forzoso*, (although adopted for reasons of necessity) that had driven its silver coins in the other States of the Union and invited Italy to comply by redeeming them. In the current situation, the silver depreciation had altered monetary conditions, and for this reason, it was requested to Belgium what in 1878 Belgium asked for Italy, that is to say, to commit itself to redeem its ecus whether the Union had ceased.

Pirmez answered his position had not changed, and the difference was the presence, in 1878, of the *corso forzoso* in Italy, contrary to the Latin Union. According to some scholars (Marconcini, 1929; Pecorari, 1999, where this latter seems to follow the former uncritically), already in 1878, the request to repatriate the ecus would have been addressed to Belgium too. It is evident that this is not the case, as stated in the minutes of the Conférence 1878 and provided that, on that occasion, Belgium was committed to requesting it against Italy. This misunderstanding originates, most probably, from the fact that, in the conference of 1885, Pirmez tried to ascribe himself a position contrary to the obligation of liquidation already in 1878, when, instead, he invited Italy to accept it for the existence of the *corso forzoso* (Filocamo, 2017, p. 67).

Instead, Belgium had never breached neither the letter nor the spirit of the Convention. The monetary conditions had changed, it was true, but the Italian

delegates themselves, in 1878, claimed that the Union had not left bimetallism, but that, rather, it was in a transitory situation. Pirmez quotes the words of Resson in the conference of 1878 (Conférence, 1885, p. 65): “The President stated that the suspension of the silver coinage in France should not be taken as a step towards the gold standard, but just a pause waiting for the moment to fully return to double standard. This is also the view of the Italian government.”

Besides, in a perspective of *lege ferenda*, as Luzzatti said, the solution could not be to impose the burden on Belgium by altering the rules retroactively. Rather, the burden should be divided proportionally between all countries.

Afterwards, the intervention of French Magnin approached the last argument of Pirmez, according to the liquidation would have been contrary to fairness. Quite the opposite was true, given that each country would guarantee the coins with its mark: France herself had, for instance, a negative balance towards Switzerland, to which should have acknowledged the liquidation. The clause, besides, would have given solidity and new value to the ecus, while not to provide it would have determined a depreciation of the Belgian ecus. Then, Magnin addressed the reasons for the outflow of Belgian ecus towards France, which had to be found not so much in the trade balance, as Pirmez said, but more in the fact that Belgium used ecus to pay interests of its government bonds, placed notably in France. Pirmez could have answered that to pay the indemnity war to Prussia after the defeat of 1871, France had brought its silver to the Brussels mint, where the minting conditions were more favourable: the number of ecus to be reimburse was also increased to serve French interests (Bamberger, 1885).

Then, his speech becomes more concrete listing problems and disadvantages that Belgium risked facing in case of leaving the Union. Among them, the return home in any case of its own ecus, as from the following 1 January (expiration date of Convention), in a not regulated, faster and sudden way. Conversely, accepting the clause with the renewal of the Convention, Belgium would have had far more time and favourable conditions to proceed with the return (Conférence, 1885, pp. 71–72). Once again, as can be seen, practical arguments were used, to which was added some veiled threat.

The other Italian delegate Ellena added that the Member States had continued to mint silver after its depreciation until 1878, and they had done it turning a profit since the legal value of coins was higher than the intrinsic one. It was, therefore, right that they guaranteed their coins (Conférence, 1885, pp. 77–78).

4 Withdrawal and Readmission of Belgium

The discussion on this question continued until the sixth session of 1^o August, the last to which Belgian delegates took part, without reaching an agreement. The subsequent session of 5 August opened without them, but informal negotiations and diplomatic contacts continued to resolve the problem and bring back Belgium

within the Union. In this regard, Italian Luzzatti played an important role, as shown by the correspondence with Frère-Orban, Say and Pirmez himself.

However, things did not change much. In a letter of 29 September 1885, Pirmez said to Luzzatti (Pecorari, 1999) that Belgium, which also showed the will to remain within the Union, was available to accept the liquidation only for the country that decides to withdraw from the Union. Luzzatti proposed instead a hybrid system with contractual liquidation up a certain amount and natural liquidation for the remaining part (letter of 1^o September to Frère Orban, published by Pecorari, 1999). Furthermore, Pirmez complained that Italy pushed for the most favoured nation clause, despite assurance to the contrary by Luzzatti himself.

On 26 October 1885, Luzzatti wrote to Minghetti (Pecorari, 1999, p. 110): “. . .Belgian struggle to rejoin; and it will take our permission that we will give only taking entirely and without mercy part to eventual concessions they get from France.” Since they did not find a common ground, the new Convention was signed on 6 November 1885 without Belgium and with the liquidation clause, which provided that in case of a dissolution of the union, each Member State should redeem its silver 5-francs coins. In addition, in a Protocol with the same date, Member States reserved the right to admit and receive into the public treasuries and banks of the issue the Belgian ecus for three months after the expiration of Convention of 1878. It was easy to foresee that these latter would have soon headed home, while to accept the liquidation clause would have given more time to the Belgian government. At this point, the perspective of leave is no longer attractive.

A month later, Belgium asked for readmission and declared it was ready to accept the liquidation, if designed in a more favourable way for its coffers. This is what happened. An Additional Act was signed on 12 December 1885, providing that only half of ecus had to be paid in gold, according to the mixed formula of Luzzatti. This disposition was extended to Italy and Greece as well.

Belgium appears as the loser of the Conference: from a starting position not so different to that of Italy in 1878 (in theory even better, because without *corso forzoso*), it has not been able to avoid the liquidation, although finally with not excessively burdensome conditions.

5 Conclusions

Monetary unions between sovereign States inevitably bring problems because of the impossibility to treat different situations with a single policy: one size does not fit all, as the actual euro area shows and the Latin Union is no exception to this rule.

The story described above is probably the moment when the greatest tensions arose in the history of the Union, but from time to time, the Member States had reasons to complain about the rules of the stipulated Conventions or had faced, in their domestic policy, the opposition of politicians, scholars and public opinion requesting to leave the Union. Once again, looking at current events of the European Monetary Union, we would say *nihil sub sole novi*.

At the same time, it shows as the decision to leave the Union entailed a financial burden such as renouncing the idea. It is of little importance to be right on the theoretical level or even on the legal level. All parties acknowledged that nothing could be requested from Belgium in both aspects. Finally, *realpolitik* prevailed. France, the stronger country in the Union, dictates the rules that, as it usually happens, reflect the power relations existing between countries.

The arguments of Pirmez appear largely sharable. Belgium had always complied with the rules, contrary to other allies: behind Italy, also France and Greece had temporarily introduced the inconvertible paper money; Switzerland had coined very few money (behaviour considered as monetary parasitism or free-riding) and during the French-Prussian war, because French money disappears from currency, had granted legal tender to the British pound. Nevertheless, it is just Belgium to experience difficulties. Something similar is happening in the actual eurozone: countries as Italy, that in the last years, contrary to what some might believe, observed the rules and implemented reforms, continue to see an increase in its public debt; Spain is emerging from crisis after receiving authorization to exceed the deficit/GDP ratio substantially, as France had done more than once; Germany herself, the country leader in Europe, for many years break the rules of the trade surplus, well above the established limit of 6%. It seems that to make things work, it is necessary to infringe the rules of the Treaties! It could be said that the rules are wrong and should be reviewed, but the impression is that countries with different characteristics and requirements need different policies.

Returning to LMU, the events of 1885 show the difficulties for Belgium to leave a union that does not protect it and that lead it to accept potentially detrimental rules to not incur higher financial costs due to the exit. In this regard, a comparison with the situation of Greece in 2015, when this country was close to the exit, can be tried, done the due differences. Greece was in a devastating economic crisis and Belgium not, Greece had violated the rules, and Belgium not. Greece, through negotiations, tries to change rules previously agreed, Belgium, through negotiations, tries to prevent the introduction of new rules. In both cases, the only possibility to reach the goal was to leave the union, because from the other side there was a wall; but, in both cases, the two countries will surrender because precisely leaving the union would bring worse consequences: the Greek government, in a dramatic way, under the pressure of BCE that had cut the liquidity to Greek banks, disown the outcome of the popular referendum and accept the heavy conditions of the Troika; Belgium asks for rejoin, as we have seen, to avoid higher and immediate charges. Another crucial difference is that Greece never intended to leave the eurozone, while for Belgium, the exit was an option that the government considered. The hypothesis of exit, in fact, if damages who exits, also frightens the allies, especially if credible. Under this aspect, the eventuality of exit can represent an important political weapon, provided that the country is ready to take the step. This is, perhaps, the reason for which the defeat of Belgium is not so severe: the other States will prefer to favour the rejoin of Belgium, by giving more favourable conditions. In 2015, instead, nothing had been obtained by Greece, because the Tsipras government had not the political strength to maintain an intransigent attitude.

On the theoretical level, the Treaty of 1885, in addition to setting forth clearly that bimetalism within the Latin Union was a fiction, marks in some way the refusal of an element of modernity, that is to say, the concept of representative money, whose value does not depend on its material substance, but on a decision of the State. The structure of the union provided an element of fiduciarity with the silver subsidiary coins, having a face value higher than the intrinsic one. Providing the liquidation clause was basically a return to commodity money. This is why measures as inconvertible paper money were considered anomalous and temporary, justifiable only for emergencies. It will be necessary to await the twentieth century so that fiat money was globally used.

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Italian Smart Working: An Innovative Approach to Improve Productivity in Public Administration



Wanda D'Avanzo

Abstract Smart working is a particular way to organize work performances, based on two main characteristics. The worker is located outside the traditional workplace and carries out his/her work through new information technologies. In Italy, the use of smart working, in the public and private sectors, was heavily implemented after the health emergency linked to Covid-19. Many companies and, above all, public administrations have now to manage a new way of working, but they don't have an adequate organization. The question is whether Italy will succeed, in the coming months, initiate incisive processes of restructuring and training, to progress towards more flexible working organizations. The contribution provided by the in-depth study of this issue should guide the transition to smart working for many categories of workers for the future, beyond the Coronavirus emergency. The aim is to encourage the initiation of restructuring and progression processes towards an economy based on innovation and change. The importance of opting for flexible and intelligent forms of work is all the more true if we consider that work traditionally understood is in a phase of full transformation, and, therefore, it is necessary to rethink its traditional forms.

Keywords Smart working · Italian dpr n. 70/1999 · Law n. 124/2015 · Law n. 81/2017 · Public administration · New technologies

1 Introduction

The problems related to the flexibility of work in public sector have repeatedly occupied the Italian legislator since the early 2000s. But today, this theme has become more relevant than ever because of the blocking of all work activities due to the Covid-19 sanitary emergency. Italy had to face the emergency in a very short

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time, finding solutions that can reconcile the need not to completely stop the country with adopting extraordinary measures to contain the epidemic, characterized by quarantine and social distancing (Carriero, 2020; Bolisani et al., 2020).

In this way, the emergency created the conditions for the immediate adoption of new technologies in many business sectors, with particular regard to public administrations. It showed the advantages offered by new technologies and the usefulness of the Internet as an element potentially capable of improving our lives, if used correctly. On March 1st 2020 the Italian Council of Ministers decided to adopt smart working as a solution to travel restrictions. This working method has been extended to all types of subordinate work for the entire duration of the emergency and is still in effect.

Smart working, or agile work, has been introduced in Italian legal system with the Law 22nd May 2017, n. 81, in which it's defined as a method of execution of the subordinate employment relationship established by agreement between the parties. It can be organized by phases, cycles, and objectives and without specific time or place restrictions. The work activities are carried out mainly with the use of new technologies. So, the work doesn't need a fixed position inside a company office to be performed (Petrillo et al., 2021).

After the Law n. 81/2017, the employer is responsible for the safety and proper functioning of the technological tools assigned to the worker. The provisions on smart working are applied to employment relationships with private companies and public administrations. The smart working contract governs the execution of the work performed outside the company premises. It also defines the exercise of the managerial power of the employer, the worker's rest times as well as the technical and organizational measures necessary to ensure the worker's disconnection from the technological work equipment. The worker who performs his/her job in smart working mode has the right to the same economic and regulatory treatment applied to workers who perform the same tasks exclusively within the company (Botteri & Cremonesi, 2016).

The paper intends to describe the issue of telework, in its modern version called smart working, that has a considerable social impact. The contribution provided by the in-depth study of this issue should guide the transition to smart working for many categories of workers for the future, beyond the Coronavirus emergency. The aim is to encourage the initiation of restructuring and progression processes towards an economy based on innovation and change.

Smart working is a topical issue and of great interest for companies and public administrations. In public sector specially, a better management of human and economic resources would have, in fact, positive repercussions for the whole society (De Masi, 2020). In Italy, the problems that still limit its application are technical, organizational, and cultural. The shortcomings are evident on the political side due to the lack of shared programs and incentives and due to a regulation that is still too rigid. The delay in the digitization of the country and the incomplete dematerialization of the activities of the public administration have caused an evident slowdown in the digital evolution processes that should make the Italian public sector more modern and efficient. Yet, although these themes are highly developed in several

European countries, they are still significantly marginal in the Italian context, both from a professional and individual point of view. But now, the economic crisis must be a push to create an economy more responsive to innovation and change. In a country that intends to recover competitiveness and efficiency, the role played by the public administration is fundamental. In an increasingly connected global society, the need to find new methods and opportunities, and the need to achieve results more efficiently and in less time, is urgent to become more competitive (Aradilla, 2020). The forced experimentation started from the health emergency has shown that digitization is the future. It is therefore necessary to take advantage of a different approach to work: culturally evolving, using new communication platforms and a way of working based on objectives and the achievement of results. The management of innovations should not stop at this phase of crisis, but prepare administrations for what will come next. This experience must be seen as an opportunity for change. In order to achieve the ambitious goal of a digital administration, it is necessary to simplify public actions and processes. And, this simplification is based on a necessary change in the organizational culture.

This study aims to analyze the development of this new form of execution of the work. In particular, the first part focuses on the analysis of current legislation on the subject and its application in the public sector. In the second part, the most important characteristics of smart working are described, highlighting its possible advantages for the future of society, but also the critical issues that still hinder its full implementation in Italy.

2 Smart Working as Evolution of Telework

The Law n. 81/2017 on smart working does not represent a recent innovation in the Italian legal system, but the evolution of a concept that already existed since 1998, known as telework. It's not clear and is not specified by the legislator the reason why smart working and telework still keep an autonomous usability (Rausei, 2017). In my opinion, this dichotomy is useless. It only intensifies a regulatory framework which, on the contrary, should be simplified. The regulatory disclosure of telework is found in the Law 16th June 1998, n. 191, and in the presidential decree eighth March 1999, n. 70, that introduced, especially for the public administration, the ability to use forms of telework for the first time in Italy. The legislative decree 30th March 2001, n. 165 disciplined flexible contractual forms of recruitment and employment of public worker, such as training contracts, part-time work, job sharing, and temporary work.

Recently, the Article 14 of the Law 7th August 2015, n. 124, ruled that public administrations must adopt organizational measures intended to set annual targets for the implementation of telework and for experimentations that allow the employees to make this choice. The mentioned regulation defines telework as a particular method of carrying out the work, characterized by two elements: the

delocalization of work, that takes place regularly outside the traditional office, and the use of new technologies.

In this productive decentralization, the execution of the work activity presupposes the use of information and communication technologies that directly connect the worker to his office to which he remains functionally connected (Ghera, 2003; Di Cocco, 2000). According to the definition provided by the European Framework Agreement on Telework of 2002, telework is a particular way to organize work performances, in which the worker is located outside the traditional workplace and carries out his work through new information technologies (Welz & Wolf, 2010).

The general notion of telework includes both the online type, in which the worker terminal is inserted in an electronic network that allows a continuous connection, in line with the rest of the organization; and the off-line type, non-interactive, which does not involve the transmission of data from the company (or administration) to the teleworker (Gaeta, 1993). Telework is therefore an extremely flexible formula that is well suited to a multiplicity of organizational solutions, capable of responding to the various needs of the production contexts. In fact, it is possible to distinguish some forms, including, for example, home telework, in which the worker, equipped with all the necessary technologies, performs the service directly from his/her home; the virtual company and mobile telework which does not have a physical office, but operates mainly online (Di Nicola et al., 1998).

In these cases, the worker has a workstation consisting of a portable personal computer, a fax modem, and a mobile phone, which allows him to manage his/her work at anytime and anywhere. Telework, characterized by its particular technical and spatial methods, appears to be neutral respect to the traditional classification of work, subordinate or independent. The provision of remote work, in fact, may be, depending on the case, linked to each of these employment contract (Del Giudice et al., 2002).

According to a part of the national doctrine, to qualify telework as a subordinate job, the managerial power could be identified in the employers right to choose and unilaterally replace, at any time, the application software that the teleworker must use in carrying out his/her duties. Other doctrine objected that it is not possible identify the subordination in the technical constraint of compliance with the procedures imposed by the software provided by the employer. This constraint, in fact, only affects the internal methods of carrying out the work activity and does not constitute a continuous obligation of obedience to the employer (Ichino, 1992, 1995; Nogler, 1998).

A different approach, instead, identifies the characteristics of subordination only in the cases of online telework. The online connection of the teleworker allows the employer to give the directives and exercise control over the performance at any time (Pizzi, 2014). Otherwise, in the case of off line work, the transmission channels of the company directives are missing and the possibilities of effective control are no longer available. In case of independent work, the application of telework law is easiest. Remote performance falls within the type of self-employment when the service is characterized by the prevailing personality, by the use of own work

equipment, as well as the absence of the continuity of insertion into the company organization (Cassano & Lopatriello, 1999).

3 Teleworking in the Public Sector

According to the Law n. 191/1998, public administrations can use forms of remote work, installing, with their own budget, the necessary IT equipment and the telematic connections, and can authorize its employees to carry out, outside the office and at the same salary, the work performed, after determining the methods for verifying the fulfillment of the performance. The subsequent Presidential Decree of March eighth 1999, n. 70, fully disciplined the matter, defining the necessary rules for the concrete use of the institute.

If a public administration intends to use telework, it must draw up a general project indicating, in particular: the activities concerned, the technologies used and the support systems, the methods of implementation, the professional types and the number of the employees whose involvement is expected, the times and methods of implementation, the verification and updating criteria, the costs and benefits. This project determines all the requirements of the work performance (Buffa, 2002).

The approval of the telework project is a responsibility of the manager of the executive office, and it is carried out in agreement with the information services manager, where present, and provides for the participation of trade union organizations representing workers. With regard to the telework project and the assignment of workers to it, it must be said that the decree n. 179/2012 converted in the Law 17th December 2012, n. 221, established that public administrations are required to implement a telework plan in which they must specify the methods of implementation and any activities for which the use of telework is not possible. Therefore, it is assumed that all activities can be carried out in teleworking mode, except for justified reasons of impossibility.

As regards the criteria for assignment to telework, the workers who have declared themselves available to fill these positions are mentioned, with priority for those who already perform the related functions or have similar work experience. So, the voluntary nature of telework is expressly indicated. It is the result of a free choice and agreement between the employer and the worker concerned (Pascucci, 1999). In the case of requests exceeding the number of positions available, the contract of telework identifies the other criteria to be privileged: situations of psycho-physical disabilities that make difficult to reach the workplace; needs for the care of children under the age of 8 or of family members or cohabitants; longer travel time from the employee's home to the office.

The assignment to telework projects does not change the nature of the existing employment relationship and it is always revocable. The revocation occurs at the written request of the worker, or when the allocation time period indicated in the project has elapsed, or even *ex officio* by the administration. In all cases, the worker returns to his/her original place of work. Therefore, the telework does not establish a

new employment relationship with public employees involved, but it creates only an organizational change. The telework in public administration can be carried out as homework, mobile work, decentralized work in satellite centers, network services, or other flexible forms, including mixed ones or alternating ones, in a suitable place different from the headquarters of the office to which the employee is assigned, where remote service is technically possible.

In any case, according to the majority orientation of jurisprudence, even if the worker changes his/her place of work, he/she continues to belong to the original production unit and must be counted in the staff of the office to which he/she belongs. The Italian Supreme Court confirmed this address, stating that the disputes relating to an employment relationship carried out with the methods of teleworking must be solved by the judge of the place where the contract was stipulated (among others: Cass. Civ. 14th October 1999, n. 11586). The remuneration must be equivalent to that of other employees. The teleworker keeps the possibility to exercise his/her trade union rights, so he/she must be informed and participate in all the activities that takes place in the company. The system of evaluation of work, performed in telework mode, does not differ from that of work performed on site. The qualitative parameters used are the same and refer to the concept of worker productivity. The control methods must be compatible with the working hours observed by the worker.

It should be noted that the verification of compliance in the telework involves issues related to the forms of remote control of the worker and the rules on the protection of personal data. It is necessary, in these cases, to harmonize the application of the various provisions (Romei, 1998). According to the Article 4 of the Italian Jobs Act, the employer who provides his/her employees with digital work tools has the right to use the data collected through these tools, without going through the prior authorization of the trade unions or the labor inspectorate. This, provided that adequate protection is given to the personal data collected, based on the rules dictated by the European General Data Protection Regulation (De Lucia & Lesce, 2018).

4 The Future of Work

Telework, like the most recent smart working, is an effective tool for rationalizing and simplifying administrative procedures. In addition, it constitutes a possible solution to the decentralization of activities, aimed at locating offices where costs are lower or to create capillary structures that can better respond to the management needs of local authorities. The possibility of segmenting the tasks to be carried out, distributing them over a network of terminals, and coordinating them remotely, the ease of control and the possibility of organizing the work processes by objectives and modulating the efficiency checks on qualitative and result parameters are certainly factors of considerable advantage for the Italian private companies and public administrations.

At the same time, the better management of life times and the reduction of the stress related to work, as well as the reduction of traffic in cities and the possibility to reduce unemployment, represent models of overall improvement in the quality of the whole community life. Certainly, the use of forms of telework needs to be balanced to avoid the risks that workers may incur, such as the sense of isolation, and the loss of the sense of belonging to a group, the risk that the teleworker will not know how to adapt and will end up not working for nothing or too much. What is needed is to develop criteria that clarify the most controversial points of the application of smart working tools.

The theme of telework is strongly felt at European level. In fact, various communications from the European Commission have focused attention on possible developments in labor law that can promote sustainable growth with more and better jobs. In 2016, the European Parliament adopted a new resolution regulating smart working. The document underlines the importance of this new way of working and focuses on the need to create working conditions that favor the balance between private and professional life (Crespi, 2020). The aim is to mobilize national and community resources to create a new prepared, trained, and flexible workforce, as well as labor markets, capable of responding to the challenges generated by the impact of globalization and the information society. The speed of technological progress, the intensification of competition linked to globalization, the evolution of consumer demand, and the growth of the service sector underline the need to increase flexibility (Contaldo, 2011).

For this reason, the governments of the Member States, the social partners, and other interested parties are called to dialogue on the ways in which labor law can contribute to this aim, increasing employment and simultaneously reducing unemployment. What is needed, from the European perspective, is to rethink the legislation on the matter, encouraging the modernization of the traditional model of the employment relationship, often no longer adequate, in its standard forms, to meet the challenges of the transformations taking place. In this perspective, the reforms, already implemented, which introduced forms of internal flexibility, have shown that the rules applicable to the workplace can be adapted to changes in economic realities. In addition, they have contributed to the evolution of relations between law and collective agreements, which is reflected in the way they regulate new problems and apply to new categories of workers. Therefore, collective agreements no longer play a merely auxiliary role in completing the legal provisions on working conditions, but they are important tools that adapt the regulatory principles to the specific economic situations and to the particular requests of the individual sectors.

What European Union wants to promote in this way is the start of restructuring and progression processes towards a knowledge-based economy, in which labor markets are more responsive to innovation and change, which also strengthens the ability of workers to anticipate and manage changes, regardless of the type of contracts (World Economic Forum, 2018). The importance of opting for flexible and smart forms of work is more true if we think that in the next few years—according to the most recent estimates—new technologies will be able to perform more than half of human work (Maio, 2018; Coombs, 2020).

5 Conclusion

So, the traditionally understood work is in a phase of full transformation, and therefore it is necessary to rethink its traditional forms.

The concepts of workplace, working time, worker control are no longer important, because the most important focus goes on the quality of work performance. From this point of view, telework and smart working—which take place mainly through the network and the latest generation of information and communication technologies—could represent a winning formula capable of ensuring greater and better productivity, while guaranteeing worker autonomy and freedom from pre-established schemes which, in the contemporary era, risk to become obsolete.

The need to change traditional organizational models is more urgent if we think that, in the Digital Economy and Society Index (DESI) report for the year 2020, Italy is one of the last countries, among the twenty-eight EU member states, for digital progress. Compared to the EU average, Italy records very low levels of digital skills. The number of ICT specialists is also far below EU average. These gaps in digital skills are reflected in the modest use of services online, including digital public services. In 2019, Italy dropped two places and now ranks last in the EU on the Human Capital dimension. Only 42% of people aged 16–74 years have at least basic digital skills (58% in the EU) and only 22% have above basic digital skills (33% in the EU). Only the 74% of Italians habitually use the Internet. Although the country ranks relatively high in offering digital public services (e-government), their use remains scarce. Similarly, Italian companies are experiencing delays in the use of technologies such as cloud and big data, as well as in the adoption of e-commerce. Consequently, Italy is still one of the countries that have experienced very few smart working experiments, especially in the public sector.

Before the pandemic, the 2019 has been the unique year in which it was possible to quantify this phenomenon: the workers assigned to telework have been 570 thousand out of a total of 18 million employees active all over the country. Numbers are very far from the averages recorded in Europe in the same period. Just for example in the Netherlands the 40% of workers can work remotely, the 35% in Sweden. And, only after the health crisis, these data have undergone a significant change: eight million of Italian workers were mandatorily assigned to telework due to the long period of the national lockdown. So, this recent health emergency has shown how important digital assets have become for our economies; has shown how networks and connectivity, data, artificial intelligence and supercomputing, support our economies, avoiding the total shutdown of our societies. But, despite this evident benefits, after this first, massive and forced experimentation, many still oppose the digitization of work as a permanent practice. In my opinion, this form of resistance to change is due to three main factors: the inability to overcome the old organizational models; the lack of a digital culture; and the inadequacy of legislation, which is redundant and often unclear. A more open vision of the culture of work would allow us to understand that the old organizational logics are no longer able to respond adequately to the needs and challenges of the future. They are not able to create

business and productive contexts, public and private, truly empowering and based on real participation. The potential of telework only manifests itself if the perspective from which the phenomenon of work is observed is changed. It is a fact that the use of telework generates an increase in company revenues equal to 25% (Varaldo, 2009). So, a clear simplification of legislation and the management of work according to a new logic, oriented towards results, would favor flexibility, increasing productivity.

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CSR and Turkish Universities in ARWU 2018: An Evaluation of the Strategic Plans and Performance Reports



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Abstract Analyzing corporate social responsibility (CSR) in the context of universities is possible through examining their strategic plans that are policy documents making institutional commitments visible. The universities' strategic plans mainly provide information on education, R&D, and community service policies that are the main responsibility areas of universities. Among these responsibilities, a particular focus is given by this study on social responsibility policies and plans of universities and their position in the global university rankings. Global university rankings, however, solely take academic activities into consideration while ignoring CSR activities. In this context, the study questions the CSR policies and performances of the universities. Twelve universities from Turkey are examined that were included in the 2018 Academic Ranking of World Universities (ARWU). Content analysis is applied to investigate the strategic plans of these universities in order to trace their CSR policy. To understand the CSR performance of universities, the Council of Higher Education's (CoHE) university reports were used. Finally, the study ranks the universities CSR performances by using ARWU's ranking method. Results show that, when academic and CSR performance of universities are compared, the rankings of eleven universities out of twelve alter. Findings show that University Social Responsibility (USR) can be applied to strengthen the image of universities and could be used as part of university rankings as a criteria when evaluating a university's performance.

Keywords Corporate Social Responsibility (CSR) · Turkey · University · ARWU · University Social Responsibility (USR) · Strategic plan

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1 Introduction

Introduction of corporate social responsibility (CSR) into the governance mechanisms of the corporate world goes back to the 1970s (Crowther & Aras, 2008) that is defined as activities producing solutions to the needs and problems of society and humanity beyond institutions' own interests (CoHE, 2018). CSR is a voluntary integration of social and environmental responsibilities into private and corporate sector that operates in line with their economic interests based on principles of respect for all stakeholders (Sapkauskiene & Leitoniene, 2014). As the definition suggests, CSR is commonly understood as activities mainly carried out by the private sector. However, CSR has increasingly become an inevitable concern and obligation beyond the private sector, including public institutions following the needs for sustainable development. Therefore, higher education institutions with their faculties, staff, students, and alumni networks have become more responsible for their activities and their results impacting local communities, media, and non-governmental organizations (NGOs) (Ahmad, 2012).

This study examines the University Social Responsibility (USR) that is defined as CSR activities of universities. Unlike business institutions, universities are nonprofit institutions. Instead, they aim to serve for the benefits of society, including developing social responsibilities. In recent years, researchers have analyzed how universities respond to social problems and sustainable development through social responsibility and community service programs (Dima et al., 2013; Topal, 2009; Gómez et al., 2018; Ahmad, 2012; Gómez and Preciado, 2013; Matiwaza & Boodhoo, 2020). Universities include USR policies in their strategic plans and performance programs while sharing their annual reports with public to inform them about issues of social responsibility and environmental and sustainable development.

Today, there are eighteen global university rankings that evaluate the performance of universities in a global context among various stakeholders (Gueorguiev, 2015). The best universities among the universities whose number is increasing day by day can be included in these indexes. The rankings, therefore, are seen as important factors when evaluating the success of universities in a global range. The Times Higher Education (THE), the Academic Ranking of World Universities (ARWU), and the QS World University Rankings are the most well-known and influential organizations that produce global rankings. Almost all of these rankings primarily measure institutions' contribution to circulation of scientific research, such as publication of journal articles indexed in the Web of Science or Scopus.

University activities are mainly categorized into four areas: Education, research, training of qualified workforce, and service to society—namely social responsibility. Although these categories are complementary to each other, academic activities are given priorities within the university rankings. In addition to academic activities, however, universities develop social responsibilities and commitments for the needs of the society that are mainly disregarded by world rankings. University rankings

that primarily measure scientific achievements, therefore, divert universities' attention away from social responsibility towards academic activities.

This study investigates the position of social responsibility within global rankings with a particular focus on the ARWU.¹ ARWU uses six indicators while ranking universities as followed: scientific awards (Nobel laureates); the number of highly cited researchers; articles published in *Nature* and *Science*; articles indexed in Science Citation Index-Expanded and Social Science Citation Index; quality of education (Nobel laureates among alumni); and finally the per capita performance of an organization. As these indicators show, social responsibility has not been used as a ranking criterion by the ARWU.

This study samples twelve universities from Turkey that are included in ARWU's, 2018 list. These universities within ARWU are chosen since the CoHE's monitoring and evaluation criteria regarding universities regional, national, and global academic success are based on ARWU. In other words, the CoHE considers ARWU as one of the legitimate global rankings in addition to Times Higher Education (THE) and QS World University Ranking. Among others, ARWU has been chosen as it has been the first global university ranking with multiple indicators (Liu, 2016) while being less criticized among other rankings for the objectivity of the ranking method (Pavel, 2015; Mester, 2017).

This study takes USR's capacity seriously for social development and improving existing socio-economic problems. It points why ARWU and other university rankings should consider CSR as an evaluation criterion when evaluating universities.² In this competitive environment, universities have large capacities to contribute to sustainable development and social problems that would also improve their corporate image. Inclusion of USR within the world rankings, therefore, would encourage universities to develop their social responsibilities further. In this context, the study argues that international ranking systems, which measure the identity and image of universities only through their scientific impact should revise their ranking criteria, and aims to contribute to the literature in this direction.

In order to analyze the USR policy and performance, this study scrutinized strategic plans of the universities as well as CoHE's university reports. The reason for examining strategic plans is to reveal USR policies formulated by academic authorities. Strategic plans are sets of principles and visions that formalize and shape institutional policies. The USR strategies included in the strategic plans of universities also inform about organizational and accountability issues. Being aware of the importance of the USR, universities share their USR goals within the frameworks of their strategic plans that comply with accountability and transparency principles for different stakeholders.

¹Funded by the Chinese government and also known as the Shanghai University Ranking, ARWU was compiled by the Shanghai Jiao Tong University's Center for World-Class Universities in 2003. Currently, this ranking is published by Shanghai Ranking Consultancy (Pavel, 2015).

²Times Higher Education (THE) World University Rankings has included "Sustainable Development Goals" as a category within their evaluation system.

2 CSR and Universities: USR

Universities include missions beyond the development of knowledge and research. Recently, concerns regarding personal and professional development of students have been developed under the category of USR (Zgaga, 2009). USR can also be defined as the responsibility of universities regarding the impact of their decisions and activities on society and the environment that aims to be transparent and distributes ethical concerns among students and staff, including the principles of justice, equality, participatory democracy, social responsibility, and sustainability (EU-USR, 2015).

USR contributes to sustainable development including the health and well-being of communities and meets stakeholders' expectations in compliance with existing laws and international norms that are in line with transparency and public accountability norms (Martin, 2013). USR activities consist of organizational governance related issues (accountability), work practices (welfare), human rights and environmental concerns, justice of business practices, students' problems, such as access to information, and community participation and development (EU-USR, 2015).

The origin of the USR goes back to the 1970s. It has developed in relation to impact of social changes in higher education, demands for less elitist access to universities, and redistribution of knowledge to society and economy. According to Bok (1982), the roles of universities that emerge from new social contexts are linked to the concept of "multi-diversity" encouraging higher education institutions to carry out new activities and services in favor of solving crucial social problems and reconciling with robust solutions as part of their new social responsibility, such as the distribution of knowledge and education for all.

One of the cornerstones in the development history of USR has been UNESCO's seventh World Conference on Higher Education in Paris in 1998. Through a World Conference Declaration, UNESCO has developed the "Higher Education Competence" initiating a bridge between society's expectations from higher education institutions and responsibilities of these institutions. The declaration has stressed ethical standards, political neutrality, critical capacity, as well as greater attention to the issues society and the world encounter. According to UNESCO (1998), the ultimate aim of higher education institutions should be to improve policies providing higher educational and research quality and service to society. This goal has required new governance techniques that combine strong understanding of global problems, new visions for solutions, and efficient management skills. According to UNESCO USR, projects should be established through a clear and precise context to guide people according to the needs and problems of society.

Following these premises, various international organizations have developed recommendations for the social and civic responsibilities of universities. One of these is the Principles for Responsible Management Education (PRME), which was developed in 2007 with the aim of introducing USR in universities work plans and activities. PRME (2020) is also supported by the United Nations (UN). PRME, working with six principles, assigns business and management schools to provide

future leaders with the skills needed to balance economic and sustainability goals. At the same time, it draws attention to the Sustainable Development Goals (SDGs) and recommends academic institutions to work in line with the UN Global Compact. Another initiative is the Global University Network for innovation (GUNI) which is an international network created in 1999. Supported by UNESCO and the Association of Catalan State Universities (ACUP), GUNI (2020) encourages higher education institutions to redefine their roles and strengthen their critical stance within society.

The social responsibility of higher education is also a central concern of the European Higher Education Area (EHEA) (EU-USR, 2015). Defining USR as an ingredient of quality and identity of universities, the European Union (EU) has designed the Comparative Research on University Social Responsibility in Europe and Development of a Community Reference Framework (EU-USR) Project. Within this policy framework, the EU has highlighted the need for a common social responsibility strategy for all European universities. The EU-USR has created a European model to strengthen social responsibilities of universities in a long-term process (EU-USR, 2020).

Apart from these, the following studies have also contributed to the development of USR: ISO 26000 (Social Responsibility Rules of the International Standards Organization); Declaration on the Responsibility of Higher Education for Democratic Culture—Citizenship, Human Rights and Sustainability, introduced by the Council of Europe in 2006; and Renewed EU Strategy for Corporate Social Responsibility 2011–14, issued by the European Commission in 2011.

USR attracts considerable academic attention due to its contribution to socio-economic and environmental sustainability. Universities are important institutions for social and economic development playing significant roles in conducting scientific research on social problems and on implementation, measurement, and support of innovative ideas and a sustainable future (Nejati et al., 2011). Although USR efforts are generally stand on moral grounds (Christensen et al., 2009), they might be also developed due to competitive ambitions in order to attract scientific staff as well as students. Studies (Plungpongpan et al., 2014) reveal that USR projects and policies significantly impact images of universities. USR has also grown due to increasing marketization of higher education (Sultana, 2011). Considering the fact that the number of universities has increased rapidly across the world, universities that have equal education and scientific qualities aim to create additional qualities in order to attract highly qualified scientific staff and students. Among others, aspect of social responsibility has gained a significant ground to find solutions for social problems. Therefore, social responsibility activities and USR agendas of universities should be important criterion when measuring universities' performances.

3 Methodology

Do universities with higher academic performance have also higher CSR performance? In order to answer this question, the research has investigated twelve Turkish universities that are listed in ARWU, 2018. In Turkey, one of the “University Monitoring and Evaluation Criterion” of CoHE is community service and social responsibility. Because of this performance criteria, many universities in Turkey gives importance to social responsibility activities. However, since most of these universities were not included in the ARWU, 2018 list, they were excluded from this research.

Various methodological tools have been used in CSR research, depending on the purpose of studies (Vourvachis, 2007): such as observations, interviews, questionnaires, longitudinal studies, and quantitative studies. In addition to these, content analysis is the most widely used research method to evaluate the social and environmental explanations of organizations in CSR research (Milne & Adler, 1999; Sapkauskiene & Leitoniene, 2014).

In this study, content analysis has been applied when analyzing the strategic plans of these universities in order to examine their CSR policies and plans. As part of the research, a CSR performance calculation method has been developed which has been based on ARWU’s ranking calculation method. The method analyzed the CSR performance scores of the universities and created a ranking accordingly.

3.1 *Determination of Universities*

At the beginning, the research process aimed to evaluate the CSR performance of the universities included in the ARWU 2019 list. However, later the year of the research was determined as 2018 since CoHE made the evaluation of 2019 with a general report and did not publish individual report cards of the universities yet. It was important that all data belong to the same year for the reliability of the study.

In the next stage, Turkish universities were determined that were listed in the ARWU, 2018. Accordingly, in an order, these were: Istanbul, Hacettepe, Ihsan Dogramaci Bilkent, Dokuz Eylul, Erciyes, Istanbul Technical, Ankara, Ege, Gazi, Middle East Technical (METU), Bogazici, Marmara, Sabanci, and Yildiz Technical University. Among these universities, Ihsan Dogramaci Bilkent and Sabanci are private universities and the others are public universities. Considering its contribution to the corporate image, it can be claimed that there has been a general bias assuming private universities would have higher CSR performance compared to public universities. It should also be noted that the research aimed to offer an opportunity to make comparisons between state and private universities. However, this was not possible as a problem was encountered to reach the strategic plans of the universities. According to the Public Financial Management and Control Law No. 5018, state universities are obliged to prepare and publish a strategic plan,

performance program, and activity report, while private universities are exempt from the Law.

This means, the strategic plan of public universities was easily accessible from the Presidency Strategy and Budget Office website (and universities' websites). Although the strategic plans of the universities show different periods, such as 2014–2018, 2015–2019, and 2017–2021, the research decided to include the year of 2018 for all of them as the year was present in all of the strategic plans. Since Law No. 5018 does not cover private universities, the strategic plan of Ihsan Dogramaci Bilkent and Sabanci universities could not be accessed on the website of the Presidency Strategy and Budget Office. Instead, through online research, mission and vision statements were found on the official websites of these two universities. However, they did not have strategic plans in the standard format of the state universities. The only texts of these universities that are accessible in the same format of public universities were the CoHE report cards. Since CoHE monitors and evaluates private universities as well as public universities, the report card included information about them all. Due to missing data however, the research decided to exclude these two universities from the study.

3.2 Content Analysis for Detecting CSR Policies

After the twelve universities were chosen, the sampling was finalized, which was followed by determining of the CSR policies of these universities. For this, content analysis was applied in the strategic plans of the universities. Researchers often use content analysis to synthesize texts that have word counts and reach smaller categories underlining keywords and concepts of texts (Weber, 1990). In CSR studies, it was observed that content analysis was predominantly quantity-focused, while qualitative approaches were not applied exclusively. There has been no standardized CSR classification commonly used in CSR research (Vourvachis, 2007).

According to the research aims, the content analysis method can be divided into two groups: while the first one aims to investigate the scope of social information disclosure, the second investigates the quality of that social information disclosure. While studies mostly examine the number of units that are conducted within the extent of social information disclosure, various other indexes are used to investigate the quality of disclosure (Sapkauskiene & Leitoniene, 2014).

In this study, the first method was used to analyze the CSR policy of universities. To understand the scope and number of terms related to CSR, universities' missions, visions, basic values/principles, and strategic goals were investigated within the strategic plans. The reason for such an analysis is that universities generally include principles and values when defining their social commitment that reflect their CSR policies. Accordingly, content analysis was applied to see to what extent the universities' strategic plans met this expectation. A content analysis program was not used at this stage of the research. Rather, the strategic plans were carefully read and application of the terms was entered manually.

The fact that the examined institutions operate in the same sector made it easier to develop analysis terms. In order to determine the terms to be used in content analysis, the indicators under the universities' heading section called "Service to Society and Social Responsibility" were used. As these indicators are shown in Table 4 and not explained here in depth.

As seen in CSR studies that use the content analysis method in their literature review, the terms and themes have been generally created by following the principles and expressions in international documents that are related to social responsibility and sustainability (Sapkauskiene & Leitoniene, 2014), such as UN Global Compact; OECD Guidelines for Multinational Enterprises, ISO 9000, SA 8000, EU Eco-label principles; and GRI Sustainability Reporting Guidelines. Since the CSR terms were determined by this method, they mostly address the social responsibility of companies. The research, therefore, decided to follow CoHE's scorecard when producing the content analysis terms of this project. Thus, it was ensured that the terms used in content analysis were directly related to the social responsibilities of universities. As a result, the terms of content analysis were chosen as follows: "Social responsibility/social problems," "continuous/lifelong education," "career education," "cooperation," "disadvantaged/disabled," and "green/environment".

3.3 Measurement of CSR Performance

In the next stage, the CSR activities of the universities were examined and the CSR performances were analyzed. In order to determine the scores of the universities in terms of their CSR activities, CSR data in CoHE's university report cards were applied. Eight indicators were used to determine the CSR performances and scores of the universities. These are the indicators that CoHE monitors when evaluating the above-mentioned universities under the title of "Service to Society and Social Responsibility." ARWU (2020)'s university ranking method was used to convert the scores of universities from the criterion determined by CoHE into performance scores and rankings. Accordingly, for each criteria, the university with the highest score was awarded 100 points while other universities were ranked as a percentage from the highest score. Following this, scores for each criteria were weighted to reach the final overall score for a university. Under the scope of this study, it should be emphasized that the CSR performance rankings are not nation-wide rankings and they only cover twelve universities.

4 Findings

4.1 CSR Policy of Universities

In order to determine the CSR policy of the universities, the missions, visions, and basic values/principles of the universities' strategic plans were analyzed. It has been observed that all of the universities include CSR policies in their strategic plans. Table 1 shows the results.

According to Table 1, the Erciyes University is the only university that includes CSR policies in its missions, visions, and core values. Gazi University has included CSR in its vision and basic values/principles. Ankara, Ege, METU, Bogaziçi, Marmara, and Yildiz Technical Universities included CSR in their mission and basic values/principles. CSR policies are included only in the missions of the Istanbul Technical University, the visions of the Hacettepe University, and in the basic values/principles of the Istanbul University. The table below shows the statements regarding the CSR within the universities' basic values/principles, missions, and visions.

Table 2 shows that the most frequently used CSR terms in the missions, visions, and basic values of universities' strategic plans are social responsibility /social problem (10) followed by the commitment to environment (9). Continuous/lifelong education and career education were used only once while cooperation and issue of disability were not included in any of the universities' missions, visions, and core values. However, the main axis of the CSR principle has been shown as development through cooperation. Bogazici (6) places the CSR terms at most among its missions, visions, and core values, while Dokuz Eylul University and Istanbul Technical University do not.

The frequency of CSR terms used in strategic goals and targets of universities is shown in Table 3. According to Table 3, all universities have included CSR terms in at least one of their strategic goals and showed at least one related target to reach this goal. CSR terms are used most frequently by Marmara University (11), and the least by Dokuz Eylul University, Istanbul Technical University, and Yildiz Technical University within their strategic goals and targets. The most commonly used CSR term is social responsibility/social issue (33) followed by environmental (12) terms. The never used CSR term is career education.

4.2 CSR Performance and Ranking of Universities

Universities were evaluated on eight CSR criteria to determine their CSR performance. These criteria were the indicators that CoHE (2020a, p. 4) monitored and evaluated under the title of "Service to Society and Social Responsibility." The data obtained from the universities' CoHE report card are processed in Table 4 shown below. However, although all universities' data for the first five of eight criteria were

Table 1 CSR in the missions, visions, and basic values/principles of the universities

University (year of strategic plan)	CSR in missions	CSR in visions	CSR in basic values / principles
Istanbul University (2013)			Respect for the environment and people, absolute compliance with ethical values
Hacettepe University (2017)		Directing the development of the country by prioritizing social problems	
Dokuz Eylul University (2015)			
Erciyes University (2016)	Sensitive to the environment and fundamental values of humanity	To be an exemplary higher education institution with the services it provides to the society	Respect for human rights and social values, ensuring stakeholder satisfaction, ensuring environmental awareness
Istanbul Technical University (2016)	To respond to the needs of the society		
Ankara University (2015)	Sensitive to the country's problems through its social responsibility awareness; protection of public interest; commitment to providing services that contribute to the development and improvement of the city in which they are located		Commitment to ethical values, integration with the city, sensitivity towards gender equality, sensitivity towards country's problems and priorities
Ege University (2013)	Presenting the knowledge gained for the benefit of the society		Social usefulness, accountability, transparency, responsibility, fairness, equality, environmental awareness
Gazi University (2013)		A nationally and internationally respected and leading university with its creative activities and community service	Being an institution that respects the environment and being aware of its social responsibility.
METU (2017)	To conduct research and serve society within the framework of universal values for society, humanity, and nature		Respect for human rights, social responsibility, commitment to campus heritage

(continued)

Table 1 (continued)

University (year of strategic plan)	CSR in missions	CSR in visions	CSR in basic values / principles
Bogazici University (2014)	To raise individuals who care about ethical values, who have developed nature and environmental awareness, and who will successfully fulfill their professional and social responsibilities; being a pioneer in the establishment and spread of science, art, and culture in society		Protecting ethical values, paying attention to public and social responsibility, sensitivity to global problems and aiming to develop solutions, sensitivity to nature and environmental problems
Marmara University (2016)	Creating value in science, culture, arts, and sports for all its stakeholders by prioritizing social values; aiming sustainability by placing emphasis on life-long learning		Commitment to ethical values, respect for differences, stakeholder focus, acting with sustainability awareness
Yildiz Technical University (2015)	Prioritizing social welfare; making life easier; ethic; people oriented; contributing to the development of the country; ecofriendly; attaches importance to cultural values; establishing collaborations; adding high quality value to society		Respectful to people, society, and environment; commitment to social responsibility and ethical values; giving importance to equality of opportunity and merit; social utility; stakeholder satisfaction; fairness.

Source: Developed by author based on the Strategic Plans of the Universities

complete, it was observed that there were deficiencies in the data of the last three criteria. Therefore, these three were excluded from the CSR performance evaluation of the universities while it was mainly conducted according to the first five criteria.

ARWU (2020)'s university ranking method was used to convert the universities' CSR performance score and into a ranking. Accordingly, for each criterion, the university that has the highest score was awarded 100 points and taken as a base to calculate the scores of the other universities in percentage.

According to Tables 4 and 5, Gazi University (161 and 100) has the highest number of social responsibility projects; Istanbul University (9841 and 100) has the highest number of certificates for vocational education; Hacettepe University (79 and 100) has the highest number of career activities for students and graduates;

Table 2 Frequency of use of CSR policies in university mission, vision, and basic values/principles

University	CSR Terms								Total
	social responsibility/social issue	Continuous/life long education	Career education	Cooperation	Disadvantages/disability	Environment	Environment	Total	
Istanbul							1		1
Hacettepe	1								1
Dokuz Eylul									
Erciyes							2		2
Istanbul Technical									
Ankara	3								3
Ege	1						1		2
Gazi							1		1
METU	1								1
Bogazici	3		1				2		6
Marmara		1							1
Yildiz Technical	1						2		3
Total	10	1	1				9		21

Source: Developed by author based on the Strategic Plans of the Universities

Table 3 The frequency of use of CSR terms in strategic goals and targets

University	CSR Terms										Total
	social responsibility/social issue	Continuous /lifelong education	Career education	Cooperation	Disadvantages/disability	Environment					
Istanbul	4	1			1						6
Hacettepe	3										3
Dokuz Eylul	2										2
Erciyes	2				1				4		7
Istanbul Technical	1								1		2
Ankara	4					2			1		7
Ege	3										3
Gazi	3					1					4
METU	4							2	1		7
Bogazici	3	1							1		5
Marmara	2					1			5		11
Yildiz Technical	2										2
Total	33	2		4	8	12					59

Source: Developed by author based on the Strategic Plans of the Universities

Table 4 CSR Performance of Universities (2018)

Criteria	Universities											
	Ist.	Hac.	Dok. Eyl.	Erc.	Ist. Tec.	Ank.	Ege	Gazi	METU	Bog.	Mar.	Yıld. Tec.
CSR1	11	22	19	12	15	115	26	161	26	17	27	4
CSR2	9841	268	932	5604	5107	31	913	7474	4911	8190	3348	1681
CSR3	35	79	15	4	15	11	56	6	50	13	17	6
CSR4	74	67	54	3	38	170	165	5	19	47	53	22
CSR5.1	31	192	38	54	9	5	52	1	5	20	22	2
CSR5.2	0	0	0	1	0	0	0	0	0	4	2	0
CSR6.1	0	0	0	0	0	4	2	0	0	1	0	1
CSR6.2	0	0	0	244	67	249	288	0	152	430	0	394

Source: Developed by author based on the Strategic Plans of the Universities

Bold is used to score the University with the highest number of activities in each CSR activity

Note: CSR 1 Number of social responsibility projects

CSR 2 Number of certificates issued by the Continuing Education Center (SEM) and Language Center (DİL MER) for vocational education

CSR 3 Number of activities carried out for students and graduates within the scope of Career Center activities

CSR 4 Number of projects carried out with other public institutions

CSR5.1 Number of activities regarding social integration and inclusion of disadvantaged groups

CSR5.2 Number of unimpeded university awards, unimpeded flag awards, unimpeded program medals, and disabled friendly awards

CSR6.1 Number of awards received by the university in the fields of zero waste, green campus, and environmentalism

CSR6.2 University ranking in the green, environmental university index (<http://greenmetric.ui.ac.id>)

Table 5 CSR Performance of Universities (%)

Criteria	Universities											
	Ist.	Hac.	Dok. Eyl.	Erc.	Ist. Tec.	Ank.	Ege	Gazi	METU	Bog.	Mar.	Yild. Tec.
CSR1	6.83	13.6	11.80	7.45	9.31	71	16.14	100	16.14	10.55	16.77	2.48
CSR2	100	2.72	9.47	56.94	51.89	0.315	9.27	75.94	49.90	83.22	34.02	17.08
CSR3	44.30	100	18.98	5.06	18.98	13.92	70.88	7.59	63.29	16.45	21.51	7.59
CSR4	43.52	39.41	31.76	1.76	22.35	100	97.05	2.94	11.17	27.64	31.17	1.17
CSR5.1	16.14	100	19.79	28.12	4.68	2.60	27.08	0.52	2.60	10.41	11.45	1.04

Source: Based on CoHE (2018) University Report Cards
 Bold is used to score the University with the highest number of activities in each CSR activity

Ankara University (170 and 100) has the highest number of projects carried out with other public institutions; and finally, Hacettepe University (192 and 100) has the highest number of activities regarding social integration and inclusion of disadvantaged groups. As the numbers show, Hacettepe University is the university which has the highest number of CSR activities in two indicators.

In the next step, the overall CSR performance scores of the universities are calculated and shown in Table 6. CSR performance scores of the universities were obtained by adding the weighted scores of the universities. Based on these scores, the CSR rankings of the universities were created. Table 7 shows a comparison of universities' academic (ARWU, 2018) and CSR rankings.

According to Table 7, only Yıldız Technical University's academic and CSR performance rankings are equal which has the lowest ranks. Hacettepe University is the one which has the lowest difference between both rankings. Hacettepe University's academic performance ranking is 2 and CSR performance ranking is 3. Erciyes University has the largest difference between both rankings as its academic performance ranking is 4 while CSR performance ranking is 11.

Content analysis and comparison of the performance rankings show that, contrary to what was expected, universities that have been ranked higher in the CSR performance have not included CSR and sustainable development terms in their strategic plans (missions, visions, basic values, strategic goals, and objectives) more often than others. For example, there is not a significant difference between the content analysis results of the strategic plan of Ankara University, which is ranked first in the CSR performance ranking, and Yıldız Technical University, which is ranked the lowest.

Many universities carry out their social responsibility projects together with their students and create policies in this direction. For instance, the strategic plans of the METU states that students have initiated studies to extend the Social Service Practices course throughout the university in order to develop and implement social responsibility projects through an interdisciplinary approach. This is a very important issue. Accordingly, the Ministry of Youth and Sports and CoHE signed a cooperation protocol in 2019 to encourage and spread social responsibility activities in universities. The ministry recommended to all universities that their programs should include elective courses called "Volunteering Studies."

Guiding students in career planning is important for USR. Universities that have career planning centers, i.e. the METU, have stated in strategic plans and performance programs that they organize activities for their students, such as career fairs. On the other hand, there are universities such as Marmara and Yıldız Technical University that either do not have a career center or their facilities are not sufficient enough. These universities have been already aware of this deficiency and admitted them among their weaknesses and inadequacies in the SWOT analysis section under their strategic plans.

As similar problems have been observed in many other universities—that this study could not cover—CoHE has requested a career planning course to be added to the curriculum of all programs that was sent to universities in 2020. Following this development, the new course started to be taught to first year students in the

Table 6 CSR performance of the universities (weighted)

Criteria	Universities											Weight	
	Ist.	Hac.	Dok. Eyl.	Erc.	Ist. Tec.	Ank.	Ege	Gazi	METU	Bog.	Mar.		Yild. Tec.
CSR1	2.049	4.08	3.54	2.235	2.793	21.3	4.842	30	4.842	3.165	5.031	0.744	30%
CSR2	5	0.136	0.4735	2.847	2.5945	0.015	0.4635	3.797	2.495	4.161	1.701	0.854	5%
CSR3	8.86	20	3.796	1.012	3.796	2.784	14.176	1.518	12.658	3.29	4.302	1.518	20%
CSR4	13.056	11.823	9.528	0.528	6.705	30	29.115	0.882	3.351	8.292	9.351	0.351	30%
CSR5.1	2.421	15	2.9685	4.218	0.702	0.39	4.062	0.078	0.39	1.5615	1.7175	0.156	15%
Total	31.386	51.039	20.306	10.84	16.5905	54.489	52.6585	36.275	23.736	20.4695	22.1025	3.623	100%

Source: Based on CoHE (2018) University Report Cards

Table 7 Comparative academic and CSR performance ranking of universities

Academic performance ranking (ARWU, 2018)		CSR performance ranking	
Rank	University	Rank	University
1	Istanbul	1	Ankara
2	Hacettepe	2	Ege
3	Dokuz Eylul	3	Hacettepe
4	Erciyes	4	Gazi
5	Istanbul Technical	5	Istanbul
6	Ankara	6	Marmara
7	Ege	7	METU
8	Gazi	8	Bogazici
9	METU	9	Dokuz Eylul
10	Bogazici	10	Istanbul Technical
11	Marmara	11	Erciyes
12	Yildiz Technical	12	Yildiz Technical

Source: Based on ARWU (2018) List and CoHE (2018) University Report Cards

2020–2021 academic year. This CoHE’s decision is extremely hopeful that can contribute to students’ career planning efficiently from the first year onwards.

5 Conclusion

This study highlighted that universities’ responsibilities towards social and environmental problems are equally important as their academic activities. USR strategies and practices complement academic activities (Tate et al., 2010). In fact, there is no specific law that forces universities to view social responsibility as their basic policy (Nejati et al., 2011). On the other hand, social practices of universities are considered as a key performance indicator (KPI) for performance measurement. For example, in Turkey, one of the “University Monitoring and Evaluation Criterion” of CoHE is community service and social responsibility.

Undoubtedly, universities play a crucial role in building a better society. Universities have several responsibilities in terms of social leadership and knowledge production that would contribute building a more just, equitable, and sustainable society. Therefore, including the USR in their strategic plans as part of their policies and strategies would safeguard one of the most significant missions of USR towards sustainability. Considering the importance of social responsibility, CoHE (2020b) states that USR projects make universities more visible to the society while contributing to the development of a common vision by bringing the university and its stakeholders together on the same ground. CoHE recommends that universities benefit from these indicators if they include USR as a priority within their strategic plans and policies. However, the most prestigious global university rankings, such as ARWU, THE, QS analyzing the quality and performance of universities based on

scientific activities do not directly and explicitly consider USR. They tend to ignore non-academic contributions and potentials that universities carry in today's societies (Tourneville, 2020). Many universities voluntarily direct their human and economic resources towards the solutions for social and environmental problems. The paper argues that international ranking systems, which measure the identity and image of universities only through their scientific impact, should revise their ranking criteria and recognize the vital roles of universities regarding social development and sustainable future. The findings of the study show that USR projects also consolidate social images of universities and should be included in university rankings as an explicit criterion next to education and research performances of a university.

Future research should explore which thematic areas (environment, gender, culture, among others) USR focuses more, how they impact communities, and what people make of them. Further research could also study other university rankings in regard to USR in order to increase attention and awareness to include USR as an evaluation criterion for university rankings.

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