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Prashant Mishra · Ashu Sharma ·
Sayantan Khanra · Sumit K. Kundu ·
Sushanta Kumar Mishra *Editors*

Digital Economy Post COVID-19 Era

Proceedings of 8th Conference
of Indian Academy of Management
(INDAM2023), Mumbai, India 2023

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Preface

This proceedings of INDAM 2023 @ SBM—NMIMS Mumbai includes book chapters of all submissions presented at the conference. The theme of the conference is *Digital Economy Post COVID-19 Era*. In the 1990s, the term ‘digital economy’ advocated the potential of Internet connectivity for economic activities. In the 2010s, organizations across countries embraced digital transformations as the fourth industrial revolution aimed at bridging the physical and cyber worlds. Consequently, the digital economy gained more prominence by challenging conventional notions about how organizations are structured, businesses interact with their consumers, and goods, services, and information flow. While policymakers are promoting digitization, organizations are re-imagining the value propositions of their industry using technology in both B2B and B2C segments. In the wake of the COVID-19 pandemic, digital transformations across industries have accelerated, wherein individuals have adopted technology-based solutions to facilitate their lives in unprecedented ways.

Technology has provided a silver lining to functional areas in organizations for managing social, economic, and environmental issues. This rapid transformation toward a digital economy has presented both challenges and opportunities. The collection of chapters in this proceedings shares insights about the digital initiatives of organizations and contemporary development in the literature on business management and allied domains. These insights emerge from multidisciplinary discussions in various themes, such as consumer behavior and marketing, economics, finance and accounting, entrepreneurship and small business management, environmental, social and governance compliance, future of work, human resource management, leadership, inclusive workforce, information systems and decision sciences,

international business and strategy, and operations and supply chain management. Overall, the chapters illustrate how organizations can adapt and transform their processes, structures, and strategies to remain relevant and competitive in the new business and economic environment.

Mumbai, India
Mumbai, India
Mumbai, India
Miami, USA
Bengaluru, India

Prashant Mishra
Ashu Sharma
Sayantan Khanra
Sumit K. Kundu
Sushanta Kumar Mishra

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Part I
Digital Economy Post COVID-19 Era
(Conference Theme)

Chapter 1

Impact of COVID-19 Pandemic on Homecare Delivery—A Comparative Study



Elham Malik

1.1 Introduction

COVID-19 is an extremely infectious disease caused by a virus from the coronavirus family. It was declared a pandemic by the World Health Organization (WHO) (2020) due to its rapid transmission and unavailability of treatment options. Responding to this public health challenge, many countries, including, large countries like India, exercised nationwide lockdown as one of the early strategies to slow down the spread (The United Nations 2020). These strategies caused some obvious and unavoidable impacts on their current operating model for homecare organizations across the globe. For instance, the lockdown imposed restrictions on the movement of nurses to their client locations. This paper intends to highlight the differences and similarities of the strategies adopted by the self-managed homecare organizations and the conventional bureaucratic homecare organizations in the Indian context. This paper also envisages the role of the 4IR technologies in addressing imminent threats to public health posed by newly evolving pathogen outbreaks.

1.2 Literature Review

Coronaviruses are a category of viruses that cause diseases in the vertebrates constituting the classes Mammalia and Aves. Coronaviruses due to their club-shaped spikes on their surface resemble solar corona and, therefore, collectively termed as coronaviruses. The diseases caused by the coronaviruses include “Severe Acute Respiratory Syndrome (SARS), Middle East Respiratory Syndrome (MERS)” (Peeri et al.

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2020), Coronavirus Disease of 2019 (COVID-19). COVID-19 is a zoonotic disease that made a leap into the humans from a wild animal/exotic meat market and emerged with its daunting consequences in Wuhan, China, in late December 2019. Moreover, owing to its infectious spread across the globe, WHO declared it a pandemic in March 2020.

Unlike previous such viral outbreaks, the research on a possible vaccine and treatment line is still underway. Some infected people may not show any symptoms initially and act as carriers of the infection, unknowingly infecting others who come in their contact.

In India, the homecare industry is in its infancy and slated for high growth due to social and economic reasons (Dey and Desai 2019). The social structure comprising joint families and familiar neighborhoods is transforming more nuclear families and work led migration of family members. This is further aggravating the problem of social isolation and the lack of necessary care provided to elders (Robison et al. 2009).

The self-managed homecare organizations are also in the span of the impact of COVID-19 that may affect homecare delivery by and large. Organizational hierarchy in bureaucratic organizations encompasses “the unity of command principle” (Fayol 2016) and “compliance to officers” (Olsen 2006). Therefore, the officers often may not feel accountable being at the topmost strata of the hierarchy in the formal bureaucratic organizations. Formal bureaucracy alone provides a limited window for innovative thoughts in workers’ minds at low strata. Managerial hierarchy is best suited for a static organizational environment and not when the organizational environment is rapidly changing or dynamic owing to its rigidity in the “direction of command from top to bottom strata of the organization” (Olsen 2006). Balancing substantive and formal bureaucracy is a recent trend being practiced by organizations to address this concern further and further enhance their agility toward VUCA, productivity, effectiveness, and efficiency.

“Self-managed organizations are to date the most perfect of the current management methods, including all the management technologies and the best practices” (Lorig 1993). Resources like innovative technologies, competent personnel, the latest hardware and software, etc., are available in plenty. However, a magic glue that helps put together these pieces coherently or in other words, a possible cutting-edge management strategy practice, is lacking. Self-managed organizations seem to be providing better responses to such calls for alternative management practices.

1.3 Research Objective

The present research aimed to undertake a comparative study between the self-managed homecare organizations and the conventional bureaucratic homecare organizations in terms of the interventions done and methods employed for the continuation of homecare delivery amidst the constraints and consequences brought about by COVID-19.

1.4 Methodology

This research work is derived from the “exploratory case study” (Eisenhardt 1989; Yin 2011) with “multiple-case design” (Pauwels and Matthyssens 2004) (comparative study in this case) in order to gain greater clarity and analytic advantage. In this research, two cases are taken up. The first one is that of a self-managed organization, i.e., (a) Buurtzorg India and another is that of a (b) a conventional hierarchical organization, i.e., Portea Medicals. The intended design offers the advantage of understanding “two contrasting situations in two different kinds of organizations through analysis arising from the two case studies independently” (Pauwels and Matthyssens 2004). This research method and multiple-case design are productive in studying the day-to-day work and events in self-managed organizations that are novel in the field of organizing and to have an in-depth record of the organizational employees’ beliefs and practices. Comparative research design relies on multiple sources of evidence, with data needing to converge in a triangulating fashion. Therefore, it yields the desired results. For conducting this exploratory comparative case study, the secondary data sources in the form of relevant research papers, online data sources, and news items are employed. The primary data sources for this study consist of the information derived from the telephonic conversations with the core team members at Buurtzorg India, Varanasi, and the secondary data sources used for this study comprise data from the relevant online sources, research papers and books which gives insights into the ways of organizing, practices, beliefs, modes of operation and myriads of other relevant information regarding Buurtzorg as an organization. Pertaining to Portea Medicals, for this study, the secondary data sources available from the Portea Medicals website were used. Secondary data pertaining to the Portea Medicals used for this study also include the open-access data provided by Portea Medicals on its news web page, which gives the relevant interviews, news and press feed whose links are made available with open access by Portea Medicals on its website. Collective meanings, culture, beliefs and attitudes coded from all the data collected regarding both the organizations were studied to obtain the results.

1.5 Case: Buurtzorg India

Buurtzorg Nederland is a self-managed, non-profit community-based homecare organization founded in 2006. “Buurtzorg Nederland is the pioneer and maiden organization in the field of self-managed organizations that deliver health care at the subscribers’ residences” (Nandram 2016). It was founded in 2006 by Jos De Blok and the co-founders Ard Leferink and Gonnie Kronenberg as a better substitute to existing homecare organizations.

“The Buurtzorg onion model” (Drennan et al. 2018) that represents a subscriber-centric approach has the features as shown in Fig. 1.1.

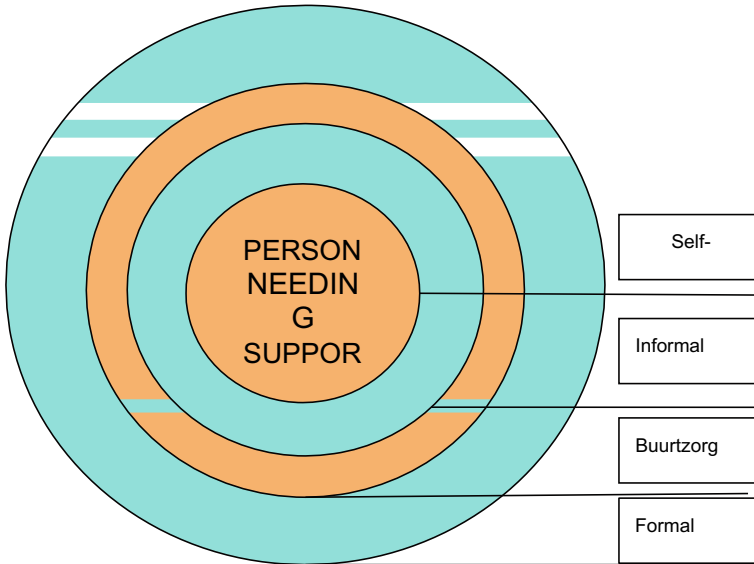


Fig. 1.1 Buurtzorg onion model

1.5.1 Self-directed Subscribers

Buurtzorg seeks to make the subscribers self-reliant as much as possible and employs their formal or professional networks and the “informal network like family or neighbors for a better and effective care delivery” (Wilson et al. 2006).

1.5.2 Self-directed Teams

Buurtzorg operates with teams of nurses that consist of twelve members. The teams are autonomous, have the freedom to choose and rent a building of their choice in their locality of operation, and are free to choose how to deliver better homecare while keeping the “resources available at the location of operation” (Gray et al. 2015). These self-directed teams show a unique blend of autonomy and responsibility. In case of need of support, “a regional coach is provided for nearly 30 teams operating in a region who facilitates solutions rather than imposing them on the teams” (Gray et al. 2015).

1.5.3 Information and Communication Technology

“Buurtzorg uses ICT to simplify tasks, lessen bureaucracy, communicate quickly and effectively, and support professionals in their daily work” (Nandram and Koster 2014). Buurtzorg employs the OMAHA system, which represents a standardized taxonomy for health care that is entirely research based. “Buurtzorg has integrated the Buurtzorg Web with the OMAHA system” (Kreitzer et al. 2015). Buurtzorg Web enables the incorporation of the best practices adopted by various teams autonomously into the organizational culture. Buurtzorg Web also enables keeping the health records, medical history of subscribers and homecare services provided through a timeline. Such records are kept not for managerial control on the teams but for future referrals for taking care of subscribers.

In most cases, the homecare subscribers cannot sustain their health and well-being without the subscribed homecare services owing to their particular health condition, critically or sub-critically ill. Family members often lack the specialized nursing skills and medical equipment/medical machines that the family members do not feel confident about operating. Besides, the family members of such subscribers might be busy in their profession and other family responsibilities that they cannot take care of patients requiring constant care.

In such ambiguous and uncertainty prone situations, the essential sectors still need to keep functioning, one of which is homecare. Self-managed homecare organizations may come to the rescue with its humanistic qualities, greater flexibility to changing environments or contexts, better decision making with myriad minds in action due to the decentralization of authority and a “Zeitgeber Focus which means acclimatization to the concerned organizational stakeholders or entities” (Nandram and Bindlish 2017a). One of the tenets of self-management is Swadharna or self-righteousness, which propels the organizational members toward appropriate actions at a time or context (Nandram and Bindlish 2017a). Swadharna as a concept can help the self-managed organizations to cope with uncertainties and ambiguous situations faced by the organizations in the disruptive times like those brought about by SARS-CoV-2 in the current context.

Trust and autonomy lie as core values at self-managed homecare organizations. Therefore, trust also plays a role in workforce-company interrelations in the context of motivation, and it enhances coherence in the workforce (as a diverse workforce may not have a common background or similarities on which to rely) (The European Business Review 2018a). Trust is featured in the context of SARS-CoV-2 in India even more by Buurtzorg India as the self-directed teams of nurses stay at the subscribers’ homes, while the family members of the subscribers provide them with their needs of food intake and rest.

Buurtzorg adopts the organizational innovation called Integrating Simplification, which allows the organization to work while keeping the subscriber’s needs at the focus (Nandram and Bindlish 2017b). It comprises the three organizing principles, namely the needing principle, the rethinking principle and the common-sensing principle, as explained in the next paragraph.

The holistic approach adopted by Buurtzorg is represented by the Buurtzorg S-model that carries the concepts of Swadharma, Swartha, Swavalamban and Swaraj (Nandram 2017). In the context of COVID-19 in India, the Swadharma of Buurtzorg India as an organization is to make the subscribers and their families as independent as possible through proper training while taking care of critically ill patients themselves amidst the current pandemic crisis in India to make the lives of subscribers better through their humanistic and quality homecare services. Through the principle of Swartha or the needing principle, the needs in the current context can be identified. Here the subscribers are identified as critically and sub-critically ill based on their homecare needs. The family members of sub-critically ill homecare subscribers are trained in essential nursing services.

In contrast, the critically ill subscribers are taken care of by the self-managed nursing teams of two members who stay at the subscriber's home to prevent cross-infections and maintain regularity of service given the current frequent lockdowns. Buurtzorg applies the Swaraj or the rethinking principle to analyze India's current pandemic situation and how it has affected India's homecare services. This principle also helps the organization analyze whether the organizational members are doing the right things at the right time while keeping their working as simple as possible. Like Buurtzorg used surgical masks instead of the N-95 masks used by the Portea Medicals. Swavalamban or the common-sensing principle helps Buurtzorg in coping with frequently changing contexts and situations as presented by the COVID-19 pandemic as reflected by the actions taken by Buurtzorg India amidst the pandemic situation while keeping the subscriber at the focus.

"The needing, rethinking and common-sensing principle that comprise authenticity as a virtue along with the Abhyasa (the art of keeping humanity above the bureaucracy), vairagya (maintaining the trust in the self-directed nursing teams) and vivekam buddhi (the art of reading between the lines) that comprise the cognition in the Integrative Yogic Leadership model" (Bindlish and Nandram 2017; The European Business Review 2018b) are the tools used by the Buurtzorg in handling the volatility, uncertainty, complexity, and ambiguity prone situations while keeping the organizational focus on the subscriber.

Keeping in view the nationwide lockdown and key measure to minimize the spread of COVID-19, i.e., social distancing, the "core team" consisting of head nurses and senior members at Buurtzorg India prepared a strategic plan for delivery of homecare services during lockdown period combating the pandemic blues as illustrated in Table 1.1.

These measures significantly reduced subscribers' and respective families' dependency on the nursing staff of the subscribed homecare agency while caring for the health of the critically ill subscribers at their homes.

Table 1.1 Comparison between the approach of Buurtzorg India and Portea Medicals to adapt to the conditions brought about by COVID-19 in India

S. No.	Impact of COVID-19 pandemic on homecare in India	How did Buurtzorg India manage homecare delivery	How did Portea Medicals manage homecare delivery
1.	Regular traveling of nurses from their respective residences to the homes of subscribers, and again back to their home after care delivery became infeasible during lockdown	<p>Self-managed nursing teams of two members take care of subscribers during this pandemic crisis at their respective residences, and they were to stay at the subscribers' residences during the lockdown period. The above action was to prevent any inconvenience accompanied with anxiety to the teams. At the same time, their daily commute caused the possibility of infections in nurses and the cross-infection between the nurses and the subscribers, thereby preventing any gap in the vital service delivery</p> <p>Therefore, the family members of such subscribers were sought by Buurtzorg India to provide meals and stay arrangements at their residences for the nursing staff</p> <p>Keeping the two nurses together was taken to prevent anxiety and emotional disturbance in the nurses and enable them to take advice from each other to serve the subscriber better. The taken action also enabled the forging of a better connection between the subscribers and the nurses. These measures show the organization's holistic approach</p>	<p>The service continuation went on as usual. Portea Medicals has launched chemotherapy at home services in Delhi, Bengaluru, Mumbai, Chennai, Hyderabad and Kolkata. The service is intended to benefit people with cancer who have been undergoing chemotherapy at hospitals and are at a higher risk of developing infections in light of COVID-19. Also the dialysis service is provided at home in these cities (Portea Medicals 2020)</p>

(continued)

Table 1.1 (continued)

S. No.	Impact of COVID-19 pandemic on homecare in India	How did Buurtzorg India manage homecare delivery	How did Portea Medicals manage homecare delivery
2.	Critically ill patients who are most needy of homecare services amidst the COVID-19 lockdown who have such illnesses that leave a patient's body permanently or partially permanently damaged thereby making them physically, economically and emotionally dependent on others for the rest of their lives were facing trouble due to disrupted homecare services	The patients who were not in critical health conditions were identified, and it was decided by Buurtzorg India to train the family members of the subscribers with stable and not critical health conditions in delivering the homecare services during COVID-19 induced lockdown which were otherwise provided by the Buurtzorg nurses. These measures significantly reduced subscribers' and respective families' dependency on the nursing staff of the subscribed homecare agency. The homecare services continued as usual for the critically ill patients by the two-member nursing team staying at the residence of the critically ill patients	No such segregation among critically and sub-critically ill patients was made and services continued in the usual manner with employees provided with all the requisites like full PPE kits. Moreover, regular health checkups are also conducted to ensure that the employees are fit (Portea Medicals 2020)
3.	Mutual fright and unease experienced by the nursing employees and the subscribers of the homecare services amidst an environment full of trepidation caused by the COVID-19-induced unknown state of affairs in India	30% of the nurses denied the duty were still paid and kept in touch through a zoom call along with the nurses who served the critically ill subscribers to prevent anxiety in them and to keep them motivated toward their job. The nurses who denied the duty were penalized neither professionally nor economically thereby, strengthening the holistic approach	There is no such report of employees' reluctance to the homecare job and the nurses feel satisfied with the provision of masks, full PPE kits, facemasks, gloves, aprons and sanitizers in ample amounts
4.	There is a higher risk of co-morbidity among the subscribers owing to the greater chances of cross-infections during the homecare delivery	The nurses took care of sanitization, provided with gloves, masks and hand rubs, besides the team of two members stays in the subscriber's home, and therefore, there is a reduced risk of the cross-infections	Full PPE kits, sanitizers and other requisites are available in ample amounts, yet the risk of cross-infections remains due to the regular commutation of nurses to and from the subscribers' residences

1.6 Results and Discussion

Pandemics accompanied by co-morbidity unleash more prominent negative impacts on general well-being and public lives. Self-managed homecare organizations may act as saviors with humanistic characteristics, more remarkable malleability to changing conditions or settings. The self-managed homecare organizations are

dynamic as inferable from the decentralization of power. Evidently, the self-managed homecare organizations with an all-inclusive, holistic and humanistic approach offer a high degree of advantage over conventional bureaucratic homecare organizations in such situations of crisis as the COVID-19 pandemic by taking care of all the stakeholders concerned with homecare so that no one is at the position of disadvantage in unprecedented and unexpected calamitous situations as the disease outbreaks or other similar situations. Therefore, they offer an upper hand over the conventional bureaucratic homecare organizations and are the answer to the frequent unforeseen impasses encountered by the countries of the world from time to time.

1.7 Conclusion

Self-managed homecare organizations are holistic in their approach and a novelty in the field of management dominated by hierarchical organizations that signify bureaucracy. Conventional homecare organizations are representatives of bureaucracy. The current pandemic is associated with a lack of lucidity about the right course of action to be undertaken by governments of affected countries and other stakeholders and its results, leading to an ambiguous scenario.

Self-managed organizations always come up with novel, innovative solutions and simplified decision making in such an ambiguous state of affairs. Such flexibility, innovation, right and prompt decision making accompanied with the needing principle, the rethinking principle and the common-sensing principle are found missing in the conventional homecare organizations.

Buurtzorg India is an example of the approach used by self-managed organizations. Trust and autonomy lie as core values at self-managed homecare organizations, and therefore, it forges a better bonding of the nurses with each other, with patients and all others who are the part of the organization.

Therefore, self-managed homecare organizations can come to the rescue with their unique, novel and practical solutions to handle the unforeseen situations and contexts and can be seen as a better alternative to the conventional homecare organizations in various respects owing to the merits discussed in this research paper.

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Chapter 2

Thematic Analysis of Human Resource Availability in Managing Perceived Residual IT Risk Management in the Post-COVID-19 Era



Anupam Rastogi, Preeti Khanna, and Akhil Kumar

2.1 Introduction

The banking, financial services, and insurance (BFSI) sector is fast adopting core banking and digital technologies for its back- and front-end operations. It is gaining much attention from practitioners, policymakers, lenders, and researchers (Lee and Shin 2018). In this regard, risk management becomes significant because of the high expectations from internal and external stakeholders. Managing IT risk is becoming a critical and essential function, which matters ‘now more than ever’ (Westerman and Hunter 2009). Past literature explores a variety of studies in the domain of IT risks, such as project management (Tesch et al. 2007), IT operations and outsourcing (Goldstein et al. 2011), and interrelationships among IT risk management practices (Vincent and Pinsker 2020). According to Yang et al. (2017), IT risk management is an essential tool that focuses on IT management. In today’s volatile, uncertain, complex, and ambiguous (VUCA) world (Bennett and Lemoine 2014), organizations are exposed to threats that impact their performance. The study indicates that the purpose of any organization is to maintain the fundamental seven pillars of information security: confidentiality, availability, integrity, non-repudiation, accountability, authenticity, and reliability of the IT systems and their data (Schumacher et al. 2013). Hence, managing risk ensures increased information security (De Smet and Mayer 2016; Kouns and Minoli 2011) **by maintaining confidentiality, integrity, and availability** (Glendon et al. 2016).

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There may be events or incidents that compromise the organization's information and communication technology (ICT) system, which can, therefore, cause adverse impacts on the organization's business processes or mission, ranging from inconsequential to catastrophic in scale. Since January 2020, the world has been observing intermittent lockdowns with different levels of control and coverage. Banks, insurance, and other financial companies were categorized as essential services. They were advised to minimize the staff count in the office and restrict business services to essential ones only (The ET 2020). The ongoing pandemic is a new experience for IT professionals in many ways. Responsibilities got multi-folded, and resources remained limited. The back-end technology system seamlessly supported the organization's front-end business channels with a high level of resilience and low dependency on human intervention. IT-based digital channels and different back-end IT systems like applications, servers, storage networks, etc., are required to run on a 24 × 7 basis, with a minimal outage and performance degradation at the highest level of information security. A media report quoted a senior executive of one of the five largest banks that their IT staff count attendance reduced to 10%, and the other 10–15% have been asked to work from home (WFH) (The ET 2020).

The concept of ITRM has evolved from a functional and technical perspective toward a more socio-managerial view. Ekelhart et al. (2007) defined ITRM as a complex, socio-technical system encompassing social and technological components and their interaction. According to Jahner and Krcmar (2005), ITRM is 'the means by which people and organizations utilize technology, gather, process, store, use, and disseminate information.' As McShane et al. (2011) and Jahner and Krcmar (2005) state, the effectiveness of ITRM needs to address two elements:

- (i) The 'soft' behavioral side embodied in the environment and
- (ii) the more concrete and technical side incorporated in the specific ITRM program that guides the enterprise.

Adopting a behavioral or social focus besides the technical one indicates a paradigm shift in ITRM. This paper highlights the significance of Human Resource Availability as a factor in ITRM in the post-COVID-19 era.

The pandemic demanded a high level of automation and less human-dependent functions in every aspect of IT management. Providing service at any time with high quality and security became the highest priority, along with maintaining the IT risk at a minimum. For IT risk management, this was an unprecedented situation wherein technology services in BFSI were in front of the business. Still, the staff enabling and supporting these services were locked down in their homes, thus widening the demand–supply gap with demand going higher and supply going lower. While the crisis was going on, this study attempted to review the ITRM process and its efficacy in the BFSI sector. The authors wish to analyze practical challenges being faced due to the unavailability of required resources with an increase in demand and emerging trends in ITRM due to such a situation. When resources are available in the office, this aspect of ITRM is challenging to observe and analyze. The rest of the paper is organized as follows: Sect. 2.2 summarizes the related literature on ITRM processes and provides IT risk examples. Section 2.3 describes a conceptual model of the ITRM

process in crises. The methods used in the study are described in Sect. 2.4. Section 2.5 presents the findings and results. Conclusions are delineated in Sect. 2.6. Section 2.7 deals with the managerial implications in the post-COVID-9 eras. Finally, Sect. 2.8 describes the limitations and scope of the study.

2.2 Literature Review

2.2.1 *Information Technology Risk Management (ITRM)*

BFSI companies adopt disruptive technologies, including machine learning and artificial intelligence, connected devices, cloud computing, core enterprise solutions, chatbots, mobile computing, and robotics automation. These technologies may reveal new IT risks that may affect internal business operations. The most common understanding of risk narrates that there is a possibility that something may go wrong (Massingham 2010). Risk is also seen as an unwanted event with negative consequences (Jaeger 2018). Management researchers tend to argue that even if we cannot eliminate risk, we can at least anticipate it and then put processes that may reduce its impact in place. There are multiple ways to define IT risk management. Dorofee (2002) defines IT risk management as ‘identifying, evaluating, selecting, and implementing actions to prevent or minimize IT risks associated with an organization’s’ assets. Information Systems Audit and Control Association (ISACA) defines IT risk as an operational risk that can create challenges in meeting strategic goals and objectives (ITGI Report 2009). Past literature discusses IT risk from a different perspective. In the study by Markus (2000), IT risk has been explored from a ‘project and financial perspective.’ Alter and Sherer (2004) proposed a work system framework to categorize risk for business managers’ information system (IS). IT risk management (ITRM) is all about best practices in the risk mitigation process. ISACA (2009a) defines ITRM as the ‘process of identifying and addressing the risk associated with use, ownership, operation, involvement, influence, and adoption of IT within an enterprise or organization.’

Further, Kouns and Minoli (2011) illustrated that the ITRM process comprises risk identification, assessment, and management (Fig. 2.1). Users’ trade associations (COBIT 5—ISACA 2012) and academicians (McShane et al. 2011; Turel and Bart 2014; Wilkin and Chenhall 2010) have regularly emphasized ITRM as a critical process for any organization dependent on information technology. A study by Wiesche et al. (2015) stated that it would be difficult to manage IT risk across business functions without defining the proper steps of an ITRM framework. The work done by Wiesche et al. (2015) explained that ITRM could be technologically constructed to support IT strategies and policies. In contrast, Jaeger (2018) relates ITRM to the organization’s culture as it includes the roles and responsibilities of the stakeholders to share risk-related knowledge with others.

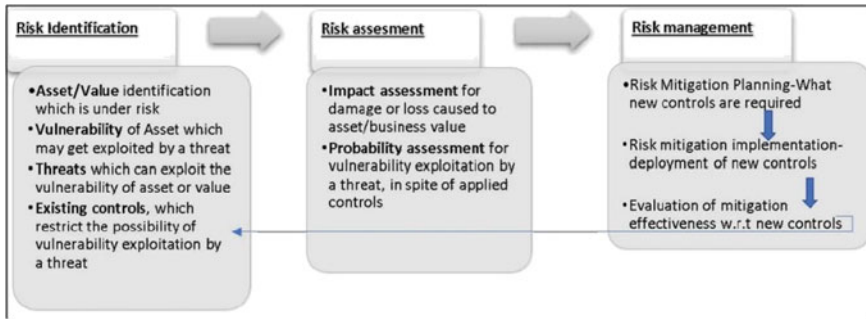


Fig. 2.1 Conventional ITRM process. *Source* Kouns and Minoli (2011)

Ekelhart et al. (2007) has defined ITRM as a socio-technical system encompassing social and technical components, and their interactions play an essential role. The technological perspective has developed the importance of ‘soft technology’ (Cram et al. 2017), focusing on human resources or what people ‘know’ and ‘can do’ (Bijker 1987).

2.2.2 Risk, Uncertainties, and BFSI Domain

The pandemic created new challenges for businesses as they were forced to work from home. From a public health perspective, it was necessary and mandatory for IT personnel to stay at home and work from home (WFH). In such an environment, IT systems were exposed to various risk situations daily, and the challenge grew daily. The gap between the demand and supply of services led to a perception of the high-risk scenario in this period. Most organizations look vulnerable and exposed to various threat situations, as working from home does not guarantee the same level of cybersecurity as an office environment.

News of the increase in IT risks incidents started appearing sometime in February–March 2020. By March 2020, it became more serious when the Computer Emergency Response Team of India (Cert-In 2020) issued a critical advisory and alert on this matter. In June 2020, Swissinfo.ch reported figures from the National Cyber Security Center (NCSC) showing that there were 350 reported cases of cyberattacks as compared to 100–150 in Switzerland in April 2020. As per Deloitte Report (2022), between February 2020 and May 2020, more than half a million people were affected by breaches where personal data was compromised. Media reports (The ET 2020) discussed that cybersecurity attacks are becoming more frequent and unique in a disaster, and attackers are taking advantage of the problem. Following are a few cases illustrating such threats in BFSI impacting their domestic and international operations.

- a. Attackers were distributing fake maps that showed infected users; this required the person to download software to generate counterfeit maps loaded with a security vulnerability (The ET 2020).
- b. Wishing is the telephone equivalent of ‘phishing’ and involves the scammer trying to convince the user to surrender private information over the phone during the panic. Sometimes they pose like friends or relatives (The ET 2020).
- c. Fake accounts are created in the name of the government or non-profit agencies and circulated on social media requesting a monetary contribution to a fraudulent relief fund (McKinsey 2020).
- d. From emails purporting to share care-related advice to harvest personal data to possible tax refunds and fake donation sites, cybercriminals are coming up with innovative ways of exploiting an issue that has received widespread public attention for their benefit (Security Architect 2020).

Researchers found that malware integrated into coronavirus-related content is being sold on Dark Web forums (NAT Law Review 2020). Apart from these basic tactics, cybercriminals are constantly developing new ways to attack businesses—from malware and ransomware attacks to malicious smartphone apps.

Safa et al. (2016) has argued that ‘People’ are the weakest link in IT risk management. The pandemic implied new dimensions of risk arising from the people factor. Decreased vigilance, generalized anxiety disorder, work from home, and network congestion led to a significant spate of cybercrime wherein cybercriminals targeted people (Simplicable 2020). Organizations were busy managing their day-to-day activities in difficult times and grappling with the unavailability of human resources and reduced productivity. Such external factors added to the chaos.

During the pandemic, the Government of India declared the BFSI sector as one of the essential services, and RBI, on March 16, 2020, came with critical business notification continuity measures (RBI 2020). The unprecedented situation was a real test of the robustness of ITRM in BFSI. It was unexpected, sudden, and unmanaged; the impact was also high. People involved in the ITRM process in the BFSI sector faced a dilemma of choice. A previous study conducted by Panetta et al. (2017) reports that ITRM in the banking and financial industry is the ‘most reported focus area starting to consider it a specific category instead of being included under the operational risk.’

Given the demanding regulatory and financial reporting requirements and the complexity of IT, business organizations require IT professionals to focus on operations related to ITRM practices, such as security, availability, and confidentiality of data. RBI regulations on strengthening internal controls and losses related to cybersecurity incidents were increasingly highlighting the importance of ITRM (RBI 2020).

IT risk management evolved in the banking and financial industry because of global financial crises and the ongoing pandemic. The authors explored the interrelationships between human and non-human (IT artifact) resources for managing IT risk in the BFSI domain using ITRM practices per compliance. Yet, the perceived residual risk caused by human errors remains unexplored.

2.3 A Conceptual Model of the IT Risk Management Process in Crises

Risk management includes identifying, measuring, controlling, mitigating, reporting, and monitoring risk. A model proposed by Bass and Robichaux (2001) is the risk at the intersection of asset criticality, vulnerability, and threat (Area 5—Fig. 2.2).

The first element, ‘asset criticality,’ is defined as ‘how important is this asset to the mission?’ The second element, ‘vulnerability,’ is defined as ‘in what ways can the asset be compromised, exploited, damaged, or destroyed?’ And the third element, ‘threat,’ is ‘that can control a business process’s vulnerability and criticality.’ Risk is the most significant where the vulnerability, threat, and mission criticality intersect. As per this model, all the assets like information, systems, programs, people, equipment, and facilities reside within the domains circumscribed by the numbered sub-domains (SD) are illustrated in Fig. 2.2.

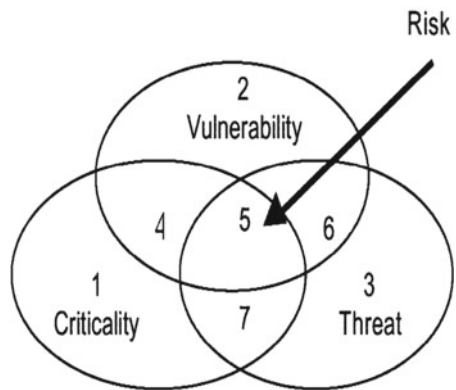
During the crisis, there was an increase in dependency on IT services, defined as the Perceived Business Value of IT services in BFSI (PBVIT) (Kohli and Grover 2008). Perceived threats (PT) are those which exploit the vulnerability. The perceived risk without the application of control is defined as PR. Perceived control risk (PCR) is applied to IT services to control risks. Perceived residual risk (PRR) is the difference between the perceived risk and the perceived control risk (ISACA 2009a).

$$\begin{aligned}
 PRR &= PR - PCR \\
 &= (PT \times PV \times PBVIT) - PCR
 \end{aligned}
 \tag{2.1}$$

Thus, the theoretical approach of the ITRM process looks to minimize PRR by minimizing the PT and PV and maximizing the PCR (Khalifa and Ali 2014).

When risk (Area under 5) increases in a crisis, it encroaches additional space from any adjacent area (1, 2, 3, 4, 6, or 7). The residual risk ‘PRR’ is critical for an organization, as indicated (5) in Fig. 2.2. It is a factor of ‘PBVIT’ (5): a union of ‘PV’ (1), ‘PT’ (2), and ‘PCR’ (3). The area under (4, 6, and 7) represents zero day

Fig. 2.2 Risk identification model. Source Bass and Robichaux (2001)



(Bilge and Dumitras 2012), wherein the possibility of risk is unknown. Perceived zero-day ‘PZD’ can convert to PRR if risk is exposed and not controlled by PCR. The examples and evidence available in the literature show that IT risk incidents have increased due to the pandemic (ISACA 2009b). And if $PRR(ACL) > PRR(BCL)$, it can be at least one of the cases mentioned below, wherein BCL represents ‘before COVID-19 lockdown’ and ACL defines ‘after COVID-19 lockdown.’

Reason 1: $PT(ACL)(3) > PT(BCL)(3)$: This means ‘perceived threats’ have increased due to this crisis which exploited vulnerabilities and caused IT-related risk incidents.

Reason 2: $PV(ACL)(2) > PV(BCL)(2)$: This means ‘perceived vulnerabilities’ have increased due to this crisis which got exploited by existing threats causing IT to risk incidents. As people started relying more on digital platforms and working from home, the cyber ecosystem’s uses increased, leading to the evolution of new vulnerabilities (NAT Law Review 2020).

Reason 3: $PZD(ACL) > PZD(BCL)$, which refers to a situation wherein many zero-day vulnerabilities were exposed during this lockdown period. However, there is no significant evidence for this.

Reason 4: $PBVIT(ACL)(1) > PBVIT(BCL)(1)$. It means the ‘perceived business value of IT’ has increased due to this crisis which has invited new vulnerabilities and IT risk incidents. The PBVIT is also evident from the literature and is an empirical fact. People stuck in their homes during the lockdown only did business through IT systems (McKinsey 2020).

Reason 5: $PCR(ACL)(5') < PCR(BCL)(5')$. It implies that the perceived control required to manage the risk incidents has reduced, and risk incidents have increased.

It is essential to understand that in ITRM, to manage the risk effectively, either PT or PV needs to be reduced, or PCR needs to be increased. PBVIT is the value that needs to be protected by ITRM, so it cannot be reduced for ITRM; instead, it needs to be supported for further growth.

From the literature review, the authors found that the main reason for the decrease in PCR is due to the following:

- i. unavailability of human resources to work due to the pandemic,
- ii. lack of control over human resources due to working from home during the pandemic, and
- iii. lack of awareness of human resources to manage vulnerabilities.

All these three have impacted the PCR, which increases the residual risk for IT service management in BFSI. Figure 2.3 provides a pictorial illustration as the world moved from a normal ITRM in BFSI (BCL) to ITRM during the COVID-19 lockdown (ACL).

Figure 2.3 shows that the subdomain #SD7 in the diagram is an area most intruded on by a crisis. The #SD7 is an area with significant PBVIT and PT, but the PV is unknown; hence, the PRR is also unknown. In this case, the PCR is not appropriately applied, and this situation needs a risk treatment or a business continuity plan. As

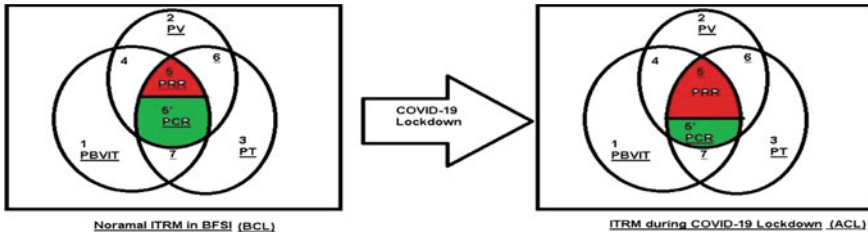


Fig. 2.3 Change in risk identification pattern. *Source* The Authors

argued by Rutenbeck, 2008, this is because of the limitation of choices to reduce the business value criticality, perceived threat, and PRR.

2.3.1 Stimulus and Significance of Our Research

We found that all the ITRM methods, processes, or frameworks focus on known vulnerabilities, and unknown vulnerabilities are almost ignored with ‘zero-day’ name tagging. Managing people’s technology, process, and behavioral aspects is the most prevalent approach to controlling IT risk. None of the risk control methods considers the unavailability of human resources for risk control. It was a perfect situation to study the robustness of the ITRM process and its significance from the people’s availability perspective to minimize the PRR.

This study complements the current ITRM processes and its theoretical body of knowledge, as there is a dilemma in applying controls in case of human unavailability. This study will help professionals prepare under uncertain situations to redefine the business continuity processes and disaster management plan for their organization to manage PRR effectively in the post-COVID-19 eras.

2.4 Methodology

2.4.1 Research Design and Data Collection

This study adopted a mixed-method approach in three phases described in the following waterfall model (Fig. 2.4). The literature discusses the importance of the stepwise approach (Goede and De Villiers 2003; Tjora 2018), which fits our requirement where the existing theoretical domain needs to be reviewed while changes arise in a practical situation (Todorova et al. 2014). The study commences with an enumeration of the ITRM process and an understanding its driving factors, as mentioned in the literature, industry research reports, and technology media reports. The second phase extends the study by gathering video interviews with the practitioners and

Phase & Type	Subject	Method	Tools	Period	Output
Phase I - Exploratory	1. Academic Literature on ITRM 2. Industry research reports 3. Technology Media Reports	Extensive literature review to explore current theory and impact on them	MS excel, Mendeley	March -April 2020	The theoretical model of ITRM process and important variables, Table 1
Phase II - Inductive	Webinar videos and IT executives of the BFSI sector	Thematical analysis to extract the perception of executives in Webinars	Microsoft speech recognition system, Ms excel	May- June 2020	Change in the relationship of variables during the crisis, Table 4
Phase III - Confirmatory	IT executives of the BFSI sector from phase II	One to one interview to confirm the theme of perception	Google forms, MS excel	July 2020	Confirmation on the concept inducted in Phase II, Fig 5

Fig. 2.4 Systematic phase wise design of our research. Source The Authors

extracting themes from all these discussions. In this phase, the authors compared the theoretical findings of stage I to the changes brought by the current situation. In the third phase, the authors confirm the results of the second phase through an in-person verification from the same practitioners whose comments were extracted for analysis in the second phase. Figure 2.4 illustrates the steps pictorially.

Phase I Study

The first objective in this phase was to understand the existing literature and theoretical body of knowledge by exploring academic scholarly reports, industry research reports, and technology media reports. To gauge the change and respective impact, it was necessary to understand the factors of the ITRM process.

With the result of a google search, a list of the most popular ITRM methods was collected in March 2020. Keywords for this search were

- “ITRM Methods,”
- “ITRM Method,”
- “IT Risk Management Methods,”
- “Information Technology Risk Management Methods.”

A total of 37 ITRM methods was found in this activity, other literature was researched for these 37, and finally, 23 ITRM methods were shortlisted for which literature was available in the public domain (Table 2.1). A total of 37 ITRM methods was found in this activity, other literature was researched for these 37, and finally, 23 ITRM methods were shortlisted for which literature was available in the public domain (Table 2.1).

Table 2.1 Details of ITRM methods studied for enumerating themes

S. No.	IT risk management methods
1	Control Objectives for Information and Related Technology (COBIT)
2	CCTA Risk Assessment and Management Methodology (CRAMM)
3	Expression of Needs and Identification of Security Objectives (EBIOS)
4	Information Risk Assessment Methodologies (IRAM)
5	Information Security Assessment and Monitoring Method (ISAMM)
6	ISO TR 13335 (a technical report which is a precursor to ISO/IEC 27005)
7	ISO/IEC 27001
8	ISO/IEC 31000
9	IT Grundschutz
10	Metodologia de Analisis Gestion de Riesgos de los Sistem as de Information (MAGERIT)
11	Méthode Harmonisée d'Analyse des Risques—Harmonized Risk Analysis Method (MEHARI)
12	Microsoft's Security Risk Management Guide
13	Integrata per la Gestione del Rischio Aziendale (MIGRA)
14	NIST SP 800-30
15	NIST SP 800-39
16	NSA LAM/IEM/IA-CMM
17	Operationally Critical Threat, Asset, and Vulnerability Evaluation (OCTAVE)
18	Open-Source Security Testing Methodology Manual (OSSTMM)
19	Practical Threat Analysis (PTA)
20	Simple to Apply Risk Assessment (SARA)
21	Security Officers Management and Analysis Project (SOMAP)
22	Simplified Process for Risk Identification (SPRINT)
23	MITRE—ATTACK

Source The Authors

Further, a study of 14 academics and 32 industry-based reports from the literature was conducted to analyze these 23 ITRM methods, which were less than 20 years old. More than 20-year-old literature was not considered for this as ITRM was not a mature concept during that time (Westerman and Hunter 2007). Further, an extensive analysis of the associated literature was done to find the relevance of these 23 ITRM methods with the HRA factor (Human Resource Availability) (Safa et al. 2016). This factor validates whether a particular ITRM method needs a human resource or is independent of HRA. In all the ITRM methods, human dependency was evident, and in a crisis where HRA is scarce, the effectiveness of all these methods was found to be uncertain. There were insignificant references for HRA in ITRM methods, and it was presumed that people are always available to ensure the controls prescribed by ITRM methods. While the practical situation on the ground was completely different,

practitioners struggled to adhere to theoretical models of controls. This situation indicated a clear gap in existing theoretical body of knowledge in this domain and the actual situation in practice. So we must know how the industry dealt with the problem in real time when the crisis was going on. We already had media reports and industry-based literature on arising risk scenarios. We were required to know IT executives' perceptions of this situation.

Phase II Study

A series of webinars and online conferences were conducted to discuss this situation after India's lockdown on March 24, 2020. IT executives of the BFSI sector and other industries were actively participating in these discussions to share and learn from the experiences of each other. Authors participated in these webinars and collected videos of eight different webinars and relevant web meetings with BFSI industry experts discussing IT risk scenarios held between April 1 and June 30, 2020. These videos included the recording of the speech, answers, and comments on various questions related to IT risk management during the lockdown. Videos of these eight webinars were used for a detailed analysis of the opinion of industry professionals on this matter. Given the situation, professionals were freely discussing this topic in webinars, and authors found these webinars as the most suitable source of information for further analysis on this matter.

To analyze the webinar discussion's content and video (Link details in Table 2.2), the authors used Microsoft Window's Speech Recognition system to convert the video's speech to text. Microsoft claims an error rate of 5.1% in this system. This text data is further used for the inductive study of broad themes discussed in this area using thematic analysis as mentioned by Braun and Clarke (2012), Castleberry and Nolen (2018) and Guest et al. (2012). A set of 94 unique and relevant statements were collected from this analysis with a count of their repetition in all these eight webinars. These statements came from 40 unique participants who expressed their opinion on IT risk during this pandemic. Quotes with similar meanings were coded into themes and sub-themes, wherein themes were associated with the variables obtained in the study's first phase. A brief profile of these 40 professionals is mentioned in Table 2.3. The average experience of these professionals was a total of 21 years, indicating their maturity and depth of practical knowledge in this field. 90% of the participants belonged to large or medium size organizations, which suggests the significance of the ITRM process in BFSI. However, the participation of the banking professional was the highest. It resonated with the density of banks in Indian BFSI, wherein they contribute almost half of the overall GDP contribution of the BFSI sector.

Minor differences in comments with the same meaning were not considered to maintain the focus on the context relevance with variables of ITRM. It was tabulated with a count for repetition of each quote by any of the participants in all eight meetings. With analyses of comments and discussion, we captured and analyzed our observations relevant to the model's variables established in Phase I, i.e., PCR, PT, PBVIT, PV, and HRA (Table 2.4). Thus, in Phase II, we were able to capture the opinion of professionals about the change and impact in ITRM due to this crisis, which was predominantly concentrated on the following:

Table 2.2 Webinar discussion and their video link of Phase II

-
1. <https://www.youtube.com/watch?v=oVOfqZn2U4k-5> (Accessed 28th July 2020)
 2. https://www.facebook.com/watch/live/?v=1606070432888668&ref=watch_permalink-7 (Accessed 28th July 2020)
 3. <https://ciso.economicstimes.indiatimes.com/news/webinar-cybersecurity-in-the-era-of-digital/66936921> (Accessed 28th July 2020)
 4. https://www.facebook.com/watch/live/?v=533952874190172&ref=watch_permalink-5 (Accessed 28th July 2020)
 5. <https://www.youtube.com/watch?v=QniBOTrQDTY-6> (Accessed 28th July 2020)
 6. <https://bfsi.economicstimes.indiatimes.com/webinars/covid-19-fallout-way-forward-for-fin-techs/4274> (Accessed 28th July 2020)
 7. <https://bfsi.eletsonline.com/elets-webinar-recalibrating-business-strategies-is-the-optimum-goal/-6> (Accessed 28th July 2020)
 8. <https://www.youtube.com/watch?v=oviSPLIkyXU-7> (Accessed 28th July 2020)
 9. https://www.facebook.com/watch/live/?v=3143720508999980&ref=watch_permalink (Accessed 28th July 2020)
-

Source The Authors

- i. There is a high dependency on human resources in the ITRM function in BFSI.
- ii. Human Resource Availability moderates the PCR, and hence the PRR.

This phase was a dissembling process and mapping of collected statements to specific relevant codes identified from the literature review.

Phase III Study

Next, authors must validate the statements' interpretation and mapping to theoretical codes. For this, a set of questions was designed and sent personally via email and LinkedIn to the same 40 practitioners identified in Phase II. This phase of the study aims to validate the themes evolving from the thematic analysis done in Phase II of the study. Only 23 out of 40 professionals participated in this stage, but as it was more than 50%, we considered their opinion to validate the whole group's opinion. The demographics of participants who participated in this phase are described in Table 2.5.

A set of 22 questions were developed to validate the mapping of themes to responses versus the practitioner's perception. It was to confirm if the perception of practitioners is aligned with or different from authors. A Google form (Table 2.6) was used to capture the responses, with respondents' perception of the concept on six points Likert scale. All these questions are mapped back at the back end with thematical codes derived from the literature review. The analysis of the responses from these 23 respondents validated the concept synthesized in Phase II of the study and is briefed further.

Table 2.3 Profile of professionals in Phase II

Participants code	Location	Designation ^a	Name of the company	Sector	No. of experience (in years)
R1	Mumbai	SVP	M&M Financial Service	NBFC	20
R2	Mumbai	SVP	DCB Bank	Bank	20
R3	Delhi	CTO	Aviva Life Insurance	Insurance	28
R4	Mumbai	CIO	Coverfax	Fintech	18
R5	Mumbai	CISO	Federal Bank	Bank	21
R6	Mumbai	CIO	NSDL	Capital market	26
R7	Mumbai	CTO	Fipp Payment Bank	Bank	27
R8	Mumbai	CISO	BSE	Capital market	22
R9	Mumbai	CRO	SBI Life	Insurance	25
R10	Mumbai	CISO	RBS	Bank	21
R11	Mumbai	CTO	NSE	Capital market	27
R12	Mumbai	CISO	Axis Bank	Bank	22
R13	Delhi	CISO	Yes Bank	Bank	24
R14	Mumbai	CDO	Kotak Mahindra Bank	Bank	21
R15	Mumbai	CIO	HDFC Bank	Bank	28
R16	Mumbai	EVP	HDFC Bank	Bank	23
R17	Mumbai	EVP	HDFC Bank	Bank	26
R18	Mumbai	EVP	HDFC Bank	Bank	17
R19	Mumbai	EVP	HDFC Bank	Bank	21
R20	Pune	President	Bajaj Alliance General Insurance	Insurance	25
R21	Mumbai	CRO	Reliance Nippon LI	Insurance	21
R22	Mumbai	CBO	SBI General Insurance	Insurance	20
R23	Delhi	SVP	Universal Sompo GI	Insurance	17
R24	Mumbai	CTO	IIFL	NBFC	23
R25	Mumbai	CTO	Aditya Birla Group	NBFC	18
R26	Mumbai	CTO	SBI Mutual Fund	Mumbai Fund	22

(continued)

Table 2.3 (continued)

Participants code	Location	Designation ^a	Name of the company	Sector	No. of experience (in years)
R27	Mumbai	CIO	Shri Arihant Co-Op Bank Ltd	Bank	11
R28	Mumbai	Head—ET	M&M Financial Services	NBFC	20
R29	Mumbai	EVP	RBL	Bank	19
R30	Mumbai	EVP	IIFL	NBFC	21
R31	Mumbai	SVP	First Capital	Bank	18
R32	Mumbai	AVP	IDBI Federal Life Insurance	Insurance	17
R33	Mumbai	CTO	Godrej Housing Finance	Housing finance	22
R34	Mumbai	CIO	ICICI Prudential MF	Mutual fund	21
R35	Mumbai	CISO	Kotak Mahindra Mutual Fund	Mutual fund	18
R36	Mumbai	CTO	Motilal Oswal	Capital market	20
R37	Mumbai	CISO	HDFC Bank	Bank	28
R38	Mumbai	SVP	HDFC Bank	Bank	22
R39	Mumbai	SVP	HDFC Bank	Bank	20
R40	Mumbai	VP	HDFC Bank	Bank	17

^a VP—vice president/SVP—senior vice president/EVP—executive vice president/AVP—assistant vice president/CTO—chief technology officer/CISO—chief information security officer/CRO—chief risk officer/CDO—chief digital officer

2.5 Findings and Results

The findings and results of this paper are analyzed considering the key objectives stated above.

It was found that when the HRA is very low, it practically impacts PCR—perceived control of risk. It justifies the Reason IV mentioned above in the conceptual model, i.e., PCR (ACL) < PCR (ACL). On PCR, everyone unanimously agreed that due to this pandemic, there is a shortage of required human resources to detect, control, and prevent IT risk incidents occurring much higher frequency.

Analysis of Phase II indicates that perceived residual risk (PRR), also considered risk incidents, has grown significantly during this pandemic. Some businesses, like Honda, had to shut their operations due to such an incident. Everyone among the

Table 2.4 Thematic analysis to identify the risk factors in Phase II study

The theme which has emerged after the analysis	Sub-theme emerged	Queries (a few examples in the related themes and sub-themes) of participants
Perceived business value of IT (PBVIT)	Increased use of IT	'COVID-19 has accelerated the industry's shift to digital' 'Financial institutions are minimizing physical touchpoints' 'We must have a proper plan and prep for such lockdown'
	Increased value of IT	'Businesses are ensuring the cybersecurity risks are taken care of' 'CISOs are involved in taking business decisions' 'Increased availability of digital touchpoints' 'Support by our top leaders has provided smooth sailing amid this unprecedented crisis'
Perceived risk control (PCR)	Human-dependent control	'This has forced the adoption of widespread tech upgrades' 'Advisories twice a week covering the entire organization's population from top to bottom' 'All-round securities to help employees, clients, partners, and society' 'Awareness, education, and security drills are essential' 'BCP strategy has changed' 'Consider outsourcing some of the more skill-dependent missions' 'Cybersecurity is now the top priority for most organizations' 'Makeshift arrangements were appropriately tested and secure' 'Need to assess people process and technology in fresh' 'People need to be educated on the action and not panic and report the attack'

(continued)

Table 2.4 (continued)

The theme which has emerged after the analysis	Sub-theme emerged	Queries (a few examples in the related themes and sub-themes) of participants
		'Prepare for additional unforeseen scenarios' 'Procedures must be refreshed' 'Redesigning cybersecurity and risk management to suit the situation, balancing digitizations' 'Reimagine IT risk assessment' 'Scenario-based access policies' 'Workforce well-being shift to remote work, finance availability, and the resiliency of operations and supply chains are biggest concerns' 'Working from home for employees with lockdown and commute restrictions coming' 'Detection tools with cyber threat intelligence to protect systems'
	Human-independent control	'End-to-end security across multiple environments, new authentication methods, monitoring services' 'Every communication traffic is being rigorously scrutinized at various levels' 'Priorities and only use company-provided IT tools' 'Reduce the number of information channels' 'Restricting features such as the availability to make screenshots' 'Rigorously scrutinized and appropriately monitored traffic' 'This needs realignment from the IT framework governing organizational policy' 'Zero-trust security architecture'

(continued)

Table 2.4 (continued)

The theme which has emerged after the analysis	Sub-theme emerged	Queries (a few examples in the related themes and sub-themes) of participants
		‘Cybersecurity threats due to remote access of critical IT infrastructure by privileged users’
Perceived threat (PT)	External threat	‘Cybercriminals see it as an opportunity’ ‘Leveraging the COVID pandemic to launch a cyberattack using as a chance’ ‘Sharp increase of phishing and identity attacks’ ‘Threat actors are fake COVID-19 websites, phishing emails, and malware’ ‘Threat actors are finding newer ways to disrupt businesses’ ‘Threat landscape evolving daily and work from home being the new normal’ ‘Unseen threat rising in the digital space’ ‘Current information from mutual sources only’
	Internal threat	‘Enterprises need to continue their focus on the entire threat life cycle’ ‘Many threat actors started to abuse the panic and discomfort’ ‘Opportunity to exfiltrate data or compromise business operations’ ‘USBs or other external devices from unknown sources’ ‘Availability of enterprise data on endpoint devices’
Perceived vulnerability (PV)	Known vulnerability	‘BEST is vulnerable to the most innovative attacks and compromise’ ‘Human assets are considered the weakest link’

(continued)

Table 2.4 (continued)

The theme which has emerged after the analysis	Sub-theme emerged	Queries (a few examples in the related themes and sub-themes) of participants
		'People are increasingly vulnerable to all sorts of social engineering manipulations'
		'Refrain from using the personal email ID or third-party services'
		'Sharing of work computers and other devices'
		'Tricks them into downloading malware'
		'Work from home framework has increased the vulnerability more than ever'
	Unknown vulnerability	'Ad hoc decision making during the crisis'
		'Additional users new to remote work setting'

Source The Authors

Table 2.5 Demographics of the participants of Phase III

Participants belong to the companies' type/size	Small	Medium	Large	Total
Banking	4	2	9	15
Insurance	1	1		2
Stock broking/capital market	1	1	1	3
Fintech		1		1
Mutual fund		1		1
Housing finance		1		1
Total	6	7	10	23

Source The Authors

participants acknowledged that COVID spread and the subsequent lockdown were almost sudden. In our study, they did not get enough time for preparedness, which is perceived control of risk (PCR). Later this was confirmed in Phase III as well.

Participants of these discussions also agreed that there is a significant increase in new vulnerabilities (PV). IT-based new fraud started for food or grocery delivery during this period. Also, hackers got a new channel of attack through the 'work from home' system to steal data or break into the private/home network. Not only the type of recent attack started but the frequency and volume of existing attacks also increased.

Table 2.6 Google form questions and corresponding risk perception (Phase III)

1	PCR1	In a situation of disaster like the COVID-19 lockdown, IT risk management is very important for my organization
2	PBVIT1	There is an increased dependency on digital channels/platforms during this period as people cannot come out of their homes
3	PBVIT2	During the lockdown, customers have trust in digital channels/platforms for financial services
4	PV1	There are set of vulnerabilities with the digital channel of financial services
5	PCR2	Increased dependency on digital services has led to an increase in management expectation from IT services
6	HRA1	There is an impact on IT service efficiency due to the COVID-19 lockdown due to a lack of resources
7	HRA2	There is a need for higher productivity from existing resources during this period of lockdown
8	PBVIT3	With the lockdown, there is a significant increase in the perceived business value of IT service in my organization
9	PCR3	There were lots of new risk scenarios observed during this period, for which the IT management team in India BFSI was not prepared
10	PT1	COVID-19 lockdown has unmasked new threat sources for IT management in BFSI services
11	PV2	COVID-19 lockdown has led to the evolution of new vulnerabilities related to IT services and their management in BFSI
12	PRR1	Due to these new threats and vulnerabilities, new kinds of risk are emerging in the field of IT service management in BFSI
13	PCR4	Due to the unavailability of required resources, the COVID-19 lockdown has impacted the risk control function in IT service management in the BFSI sector
14	PBVIT4	Being a non-critical function IT service, its management and value for supporting BFSI business did not suffer a lot due to the COVID-19 lockdown
15	PV3	While the risk for IT service management during the COVID-19 lockdown has increased in BFSI, all these risks are the exploitation of existing vulnerabilities in technology-related services
16	PT2	The threat sources causing new kinds of risk during COVID-19, like fraud, fishing, etc., have existed for a long time
17	PCR5	IT risk management is operating smoothly during the COVID-19 lockdown as a crucial support function for the business
18	PRR2	The COVID-19 lockdown has given me insightful experience in risk management, which can be used to handle such a situation in the future
19	HRA3	Technology functions with higher dependency on manual processes observed more impact
20	PBVIT5	COVID lockdown may give a fresh push for digitization and automation in my organization
21	PCR6	DR and BCP strategy of my organization was sufficient to deal with the COVID-19 lockdown situation
22	PRR3	There is no significant impact on IT risk management practice in BFSI due to the COVID-19 lockdown

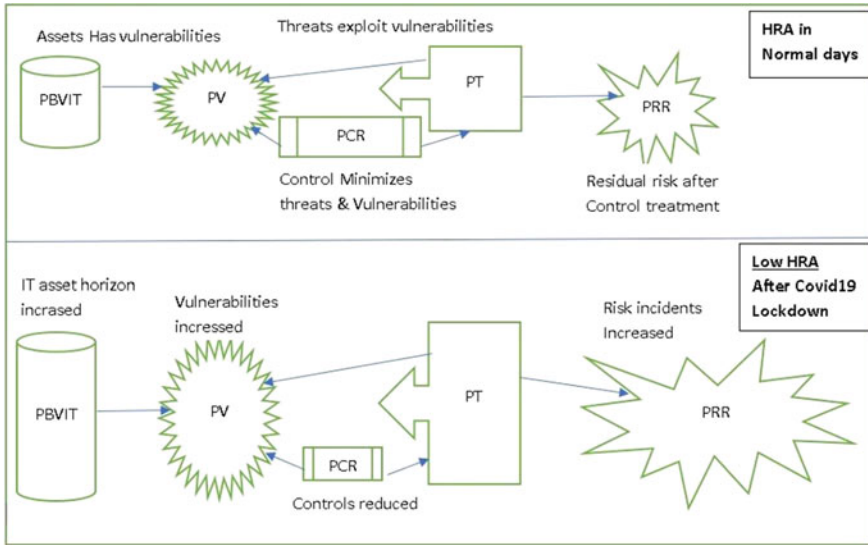


Fig. 2.5 Illustration of changes in ITRM during the crisis. *Source* The Authors

From the analysis of Phase III, it was identified that unknown vulnerabilities of the critical asset of valued business services were the most significant concern during the pandemic. Still, they do not hold considerable significance in people’s perceptions. As they are unknown, there is no foresight, no solution, and the efforts/cost of minimizing the risk probability will be infinite, especially during lockdowns like this crisis when resources are scarce.

It was established that HRA is the most significant factor for the changes in associated variables of the ITRM process. Figure 2.5 illustrates this case wherein we can observe that PBVIT has significantly increased due to remote access, the work-from-home situation, and high dependency on the digital mode of transaction and communication. At the same time, PCR got reduced due to reduced HRA.

Due to an increase in the size of PBVIT, associated vulnerabilities have also increased along with their threats. However, the risk control function of PCR is reduced significantly due to a lack of human resources, which leads to an increase in PRR, i.e., risk incidents. Low HRA indicates unavailability or scarcity of people, which itself has become a vulnerability that was not known or experienced earlier. Thus, PCR as a moderator between PV and PT alleviates both the factor of PV and PT under the influence of HRA, resulting in increased PRR.

One noteworthy point we understand in these discussions is that IT risk and security control are not limited to the perimeter boundaries of the respective office or data center. With work from home, the enterprise IT network extended to their employees’ partners and vendors’ geographical locations. It has suddenly increased the risk horizon, exposing new vulnerabilities never foreseen.

2.6 Conclusion

Human-created technology uses and controls it as desired. Still, when a crisis like COVID-19 hits and human is locked down, the ability to control technology reduces, and the risk of using technology increases. This pandemic was a wake-up call to all of us. Our life and work will not be the same in the future. In the context of IT management and decisions, the pandemic has offered opportunities to understand the exposed weaknesses and vulnerabilities of IT planning, implementations, risk management, and associated findings. Management of IT risks degraded to mal-management, leading to numerous unforeseen IT security and risk incidents.

This paper explored various factors of ITRM, like business value, threats, vulnerabilities, assessment, probability, risk control, mitigation, and remediation. There is much to explore from the risk identification and control aspect for better effectiveness, as this domain is gaining significance with a boom in IT-enabled services. It was observed that there is a gap in the existing ITRM process regarding unknown vulnerabilities activated during such disasters in a lack of controls. Human-dependent control in ITRM can also be considered one of the most significant threats and vulnerabilities, which aggravates during crises.

The unavailability of human resources and lack of adequate risk control was the most significant unknown vulnerability which got exploited and caused risk incidents. It may sound over-complicated to bring artificial intelligence (AI) into ITRM. Still, in an ever-changing security environment, this could be the solution many businesses have sought to keep their systems safe by promoting independent human controls in ITRM. There are various opportunities from the management control and decision method perspective. During a crisis, management decision needs to be fast, but reduced proximity of control slows it. This mal-management can be improved by increasing control frequency, if possible, manually or automated.

For academicians, this work will add two new dimensions of 'Human Resource Availability' (HRA) and 'Human Resource Reachability' (HRR) in the existing ITRM process (Safa et al. 2016). It will answer questions on human dependency in the ITRM process and its impact during such a situation.

2.7 Implications in the Post-COVID-19 Era

The findings of our study have managerial implications in businesses. This work will help business organizations and IT managers to plan and organize better risk management, decision process, controls, and practices. Insights into the different challenges and limitations to manage them shall support them in getting ready easily, quickly, and efficiently, which will help reduce risk incidents and business losses during a crisis. Many organizations are reluctant to invest heavily in IT risk, as Khalifa and Ali (2014) mentioned, with a perception that disruptions are relatively infrequent events and most of the ITRM process is human dependent.

There is always a dilemma for managers regarding how to justify the investment to automate and mitigate IT risk under any scenario without high human dependency. This crisis has given us a new lesson to operate with minimal physical intervention by a human. At the present level of maturity, where businesses are looking toward the Industry 4.0 ITRM process, its method must be more automated and human independent. Technologies like artificial intelligence, robotic process automation, virtual reality, and augmented reality can significantly help.

For academicians and researchers, it is a new dimension of study and analysis to find the impact of HRA in ITRM and its level of significance and dependency. It can also be explored that PRR can be minimized up to what level and what should be a balanced benchmark for accepting PRR.

2.8 Limitations and Scope of the Study

Our study can be understood along with its limitations. It was a case-specific study in crises to understand the risk associated with IT service in the BFSI domain. As disclosure and accepting risk are sensitive issues, especially in the financial sector, discussing the same in open forums by top financial professionals is challenging. Future studies should expand the sources of gathering the information beyond our efforts to add value to our findings substantially.

This study focuses on IT risk identification in detail per the ITRM model by exploring the change in pattern in ITRM. Still, the change's intensity or the quantifiable value was not measured. A similar analysis with a study of vulnerability and IT risk incident databases can further extend it.

Another significant limitation was the incorporation of all the factors as per the ITRM model, like risk measurement and assessment, risk mitigation, risk reporting and monitoring, and risk governance. There are multiple ways to extend this study on IT risk management in the financial industry.

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Chapter 3

Emergent Telemedicine Practice in India: Challenge and Response



G. Jabarethina and K. C. John

3.1 Introduction

The COVID-19 pandemic pushed global healthcare's shift to digital technology. In India as well, it catalyzes patients and healthcare providers to adopt digital health solutions, like telemedicine and mobile healthcare applications, in the setting of strict lockdown guidelines of social withdrawal, mask-wearing, and stay-at-home.

The pandemic emphasized the importance of digital health technology and the necessity for continued deployment. In addition, it highlighted the advantages of patient access to care and decreased healthcare expenses.

The present paper reviews the emerging telemedicine practices in India to identify the main barriers to adoption for patients and healthcare professionals as well as the areas that need to be optimized to ensure digital innovation like telemedicine is scaled to improve patient outcomes. It also addresses technical issues and privacy concerns through a multiple-stakeholder perspective.

3.2 Materials and Methods

The review study conducted searches in the databases Scopus and PubMed on a spectrum of telemedicine-related topics in India, including multiple government initiatives, steps made by the healthcare sector, academic publications, news articles, and functions of the organization. Searches were also conducted on the official websites

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Table 3.1 Inclusion criteria of literature review

Criteria	Study characteristics
Electronic literature search	PubMed, Scopus, Government Reports, Webpage Articles, and Newspaper Articles, Websites of Healthcare Organizations, Ministry of Health and Family Welfare, NITI Aayog, ISRO, Telemedicine Society of India, National Health Portal, WHO, BBNL, National Health Systems Resource Centre, Amirtha Centre for Digital Health, Apollo Telemedicine Network Foundation, Fortis Tele-consult, Deloitte, Narayana Health-Cisco
Websites search	
Article types	Academic journal articles (31), webpage articles (6), newspaper articles (2), government reports (12)
Academic article-the year of publication	2002 (1), 2009 (1), 2011 (1), 2015 (2), 2016 (1), 2017 (1), 2018 (3), 2019 (3), 2020 (6), 2021 (8), 2022 (4)
Academic article-databases	PubMed (22), Scopus (9)
Articles-field of research and location	Telemedicine, India

Source Authors’ elaboration

of the Ministry of Health and Family Welfare (MoHFW), ISRO, NITI Aayog, the Telemedicine Society of India, and the government and private healthcare organizations. Telemedicine is a developing market. The broad search terms employed therefore included “telemedicine,” “India,” and “COVID-19.”

The inclusion criteria explored telemedicine services that use digital communication technology to establish mutual communication between patients and healthcare professionals for the provision/receiving of healthcare services, as well as to enable interactions between healthcare experts for medical consultations. Table 3.1 provides a summary of the inclusion criteria of the review in detail.

3.3 What Is Telemedicine?

The modern Indian healthcare system is adaptable enough to undergo significant changes, such as giving telemedicine more prominence. Telemedicine is now at the forefront of medical practice as a result of technological advancements and pandemic-related socioeconomic concerns. Remote patient care is made possible through telemedicine. Using “live chats” and video calling, healthcare providers are technologically able to provide care directly to a patient in their homes. Healthcare experts are increasingly considering web-based telemedicine services as potential substitutes for medical procedures.

The modality of telemedicine is thought to be low resource. A patient-focused, secure, and safe technology platform can enable a healthcare professional to conduct telemedicine visits using a PC with a microphone and camera, smartphone, or tablet.

There are four main categories for telemedicine. The first classification is based on the method of communication (email/fax, video apps, Skype, audio-phone, apps, etc.). Second, categorization is based on the timing of information transmission (real-time video/audio/text telemedicine, which allows for simultaneous information exchange, diagnosis, and administration of medicines, among other things), and store-and-forward telemedicine (laboratory reports, images, etc.). Third, classification is based on how people interact with one another (patient to the registered medical practitioner, caregiver to the registered medical practitioner, registered medical practitioner to registered medical practitioner, and health worker to registered medical practitioner). Fourthly, non-emergency consultations are classified according to their purpose (initial consultations with any RMP for diagnosis or management are only allowed for first aid, life-saving measures, referrals, and follow-up with the same RMP) (World Health Organisation 2010).

3.4 Why Indian Health Care Needs Telemedicine?

3.4.1 *Low Doctor–Population Ratio*

The WHO recommends a doctor-to-population ratio of 1–1000 (World Health Organisation 2010). According to Ms. Anupriya Patel, the former Union Minister of Health and Family Welfare, the doctor–population ratio in India in 2017 was 0.62:1000 (The Economic Times 2017). According to Dr. Bharat Pravin Pawar, Minister of State for Health and Family Welfare, the doctor–population ratio of 1:834 is far more favorable, assuming 80% availability of registered allopathic doctors and 565,000 Ayurvedic, Unani, Siddha, and homeopathic doctors (Sabha 2022).

3.4.2 *Chronic Poverty: One Illness Away*

Using the “stages of advancement” concept, it was underlined how frequently poverty is formed. Many Indians have managed to escape poverty, but many more are also succumbing to chronic poverty as a result of illness (Krishna 2013). Based on Brookings India’s research of NSSO surveys, NITI Aayog (2021a) highlighted that more than 7% of India’s population is forced into poverty each year as a result of excessive out-of-pocket expenses (OOPE). The most obvious way that COVID-19 made poverty worse was by increasing the number of illnesses and deaths that occur inside households (Krishna 2013).

3.4.3 *Fragile Healthcare Infrastructure*

COVID-19 also brought India's fragile healthcare system to light. There is a severe lack of healthcare services available in rural India. According to the National Health Account (2022), public healthcare spending as a share of GDP was 1.3% in the years 2018–19. According to the Economic Survey (2021–22), public healthcare spending should increase to between 2.5 and 3% of GDP. Himachal Pradesh has the largest percentage of the gross state product (GSDP) devoted to health care (91.7%) and the highest government expenditure per person (\$3604) (Ministry of Finance 2022). On the other hand, Uttar Pradesh has the highest O–O–P–E in terms of both total health spending (71.3%) and GDP (3.5%). Telemedicine will help significantly the National Health Policy (2017) because it is a low-resource modality (Ministry of Health and Family Welfare 2017).

3.5 Evolution of Telemedicine in India

The 2020 COVID-19 epidemic triggered a quick transition even though the Indian healthcare system started experimenting with telemedicine in the late 1990s. The development of telemedicine services in India was significantly aided by the Indian Space Research Organization (ISRO), Department of Information Technology (DIT), Ministry of Health and Family Welfare (MoHFW), Government of India, state governments, and medical research organizations (Agarwal et al.). The initial impetus for the evolution of telemedicine in India is summarized in Table 3.2.

3.6 Telemedicine Workflow

COVID-19 triggered a shift in health care toward a patient-centric model of care since it was necessary to foster social isolation in a secure setting. During the pandemic, medical practitioners redefined virtual visits as a crucial communication and therapy tool. In March 2020, the Indian government announced telemedicine practice guidelines for licensed doctors who practice allopathy, Ayurveda, Siddha, Unani, and homeopathy. The details are given in Table 3.3.

Even though telehealth and telemedicine services are complementary, it is important to distinguish between them. Telemedicine is the practice of providing clinical or medical services over the Internet. In addition to other remote non-clinical services, telehealth is a larger platform that enables sessions between patients and healthcare professionals with a wider range of clinical and workflow activities, remote monitoring, and multiple provider interactions over time. When completely constructed, the NDHB will help the National Health Stack spread telemedicine among the states. This may also give patients with uncommon diseases and other routes to seek highly

Table 3.2 Evolution of telemedicine in India

Nodal agency	Outcome	Participating states and institutions	Source
Department of Information Technology (DIT) Telemedicine Project—2000	To provide better medical treatment in rural India, including services for HIV, dermatology, pediatrics, cardiology, cancer, and pediatrics To give healthcare professionals training and instruction in medicine	IIT Kharagpur and Webel ECS are monitoring and diagnosing diseases in West Bengal Tamil Nadu and Kerala offer cancer sufferers treatment Greater access to healthcare among Punjabi and Maharashtrian rural areas Medical facilities: All India Institute of Medical Science in New Delhi Lucknow's Post-Graduate Institute of Medical Science, Gandhi, Sanjay Post Graduate Institute of Medical Education and Research in Chandigarh	Kaeley et al. (2021) https://www.nhm.gov.in/images/pdf/Telemedicine/Tel_emedicine.pdf
Indian Space Research Organization-North Eastern Space Application Centre (NE-SAC) 2000	To connect reputed district-level hospitals in the North Eastern region to tertiary care facilities To offer the greatest healthcare services in isolated areas	Arunachala Pradesh, Assam, Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura 72 Regional Telemedicine Nodal Centers Village Resource Centers GSAT-3 and INSTA-3A Communication Satellite	Bhaskaranarayana et al. (2009), Indian Space Research Organisation (n.d.), Agarwal et al. (2020) and National Health Portal (2016)

(continued)

Table 3.2 (continued)

Nodal agency	Outcome	Participating states and institutions	Source
Indian Space Research Organization-Telemedicine Pilot Project 2001	To improve rural health care in a few chosen villages	Andhra Pradesh Rural Healthcare Services and Apollo Hospital Andhra Pradesh Rural Healthcare Services and Apollo Hospital ISRO-MSSRF-VRC satellite-based effort jointly launched the Village Resource Centre (VRC) Project	Chellaiyan et al. (2019) and Indian Space Research Organisation (n.d.)
Indian Space Research Organization Mobile Telemedicine Project 2000 and telecardiology consultations	To establish mobile teleophthalmology services for the National Blindness Control Programme to manage ocular illnesses	Shankara Nethralaya, Chennai Meenakshi Eye Mission, Madurai Aravinda Eye Hospital, Madurai Bangalore's Narayana Hrudyalaya	Chellaiyan et al. (2019) and National Health Portal (2016)
Ministry of Health and Family Welfare, Govt. Integrated Disease Surveillance Project Network 2004	776 sites throughout all states are connected to create an IT network District headquarters and the nation's top institutions are connected by a network of referral labs that provides diagnostic services for epidemic-prone illness outbreaks In India, 90% of the districts submit weekly surveillance data on illness patterns and seasonality The state reports 30 outbreaks on average per week to the Central Surveillance Unit A rapid Response Team was sent to the scene to identify and contain the epidemic	All district hospitals were initially affiliated with a few state medical colleges before expanding to include all states	Ministry of Health and Family Welfare (2021) and Mahajan (2021)

Source Authors' compilation

Table 3.3 Telemedicine guidelines

S. No.	Agency	Guidelines+	Source
1.	MoHFW and NITI Aayog	Telemedicine practice guidelines: enabling registered medical professionals to deliver healthcare using telemedicine, March 2020	Board of Governors in Supersession of the Medical Council of India (2020)
2.	Central Council of Indian Medicine	Telemedicine practice guidelines for Ayurvedic, Siddha, and Unani practitioners were published in 2020 by the Central Council of Indian Medicine (CCIM)	Central Council of Indian Medicine (2020)
3.	Central Council of Homeopathy	Central Council of Homoeopathy (a statutory body under the Ministry of AYUSH, Govt. of India) Telemedicine practice guidelines: enabling registered homeopathic practitioners to provide healthcare using telemedicine	Central Council of Homoeopathy (2020)

Source Authors' compilation

specialized care across a spectrum of allopathy and traditional healthcare services, which will assist and address the shortages of healthcare professionals and the uneven distribution of physicians.

The advantages of telemedicine as it expands include its cost-effectiveness, capacity to expand access to specialty services, and potential to assist in resolving the impending physician shortage. The absence of technology resources, connectivity issues in some rural locations, and difficulties in conducting conventional patient assessments are also disadvantages.

The Government of India published telemedicine guidelines that provided practitioners with a thorough workflow for first consultations, follow-up consultations, and teleconsultations with licensed medical professionals (Medical Council of India 2020, pp. 37–41).

Corporate Sector Hospitals have experimented with developing technology and introduced process innovation while adhering to the telemedicine guidelines to extend the reach of telemedicine to a significant number of underserved patients in isolated rural locations. The use of developing technology in private hospitals and the ensuing process of innovation are described in Table 3.4.

Table 3.4 Corporate sector hospitals telemedicine projects

Corporate hospital group and source	Telemedicine programs
<p><i>Apollo Hospital Group</i> (Ganapathy 2021; Apollo Telemedicine Network Foundation 2022)</p>	<p>The first Telemedicine Center, which connected the Andhra Pradesh village of Angora to Apollo Chennai in 2000 Through its Rural Connect Program, the Apollo Telemedicine Networking Foundation connects more than 100,000 Common Service Centers The largest and most established multi-specialty telemedicine network in South Asia is the Apollo Telehealth Service. It benefits both urban and rural communities by making high-quality healthcare more accessible. Apollo Telehealth is a leader in integrated healthcare delivery, offering a range of services including teleconsultations, teleradiology, telecardiology, tele-condition management, and tele-ICU For the Public–Private Partnership Program, the State Governments of Gujarat, Himachal Pradesh, Jharkhand, Uttar Pradesh, Madhya Pradesh, and Apollo Hospitals have signed Memorandums of Understanding. The improvement of rural health care and awareness campaigns is the main goal of the public–private partnership</p>
<p><i>Narayana Health Group, Bengaluru—CISCO Virtual Expertise Digital Solution</i> (Business Standard 2016; Narayana Health-Cisco Meraki 2022)</p>	<p>NH/CISCO installed cutting-edge telemedicine systems at three centers: SIRSI and BELLARY in Karnataka, RAJARHAT in Bengal, and NH City, Bengaluru. It facilitates an easy and effective connection between patients and NH specialists The NH provides remote patients with affordable diagnostic services for super-specialties including neurology, nephrology, oncology, and cardiology with a high-quality, high-value patient experience CISCO’s Virtual Expertise Digital Solution brings voice, video, and data are made available to patients wherever they are located. It proved that telehealth and embedded sensors in medical equipment can open up fresh possibilities for healthcare innovation Real-time telemetry of medical devices, including data, audio, high-definition two-way movies, ECG, other vital signs, radiography, analytics of medical reports, and a web-based interface that supports clients on mobile endpoints</p>

(continued)

Table 3.4 (continued)

Corporate hospital group and source	Telemedicine programs
<i>Amrita Institute of Medical Sciences and Research Center (AIMS), Kochi</i> (Amrita Center for Digital Health 2022)	Since 2000, comprehensive telemedicine solutions have been created to connect hospitals and clinics in rural India with AIMS, Kochi Tele-Cardiology, Tele-Radiology, Tele-Dermatology, Tele-Ophthalmology, Tele-Pathology, Tele-Psychiatry, and Tele-Mentoring services are all provided by Amrita Telemedicine With more than 60 national centers and 9 foreign centers, the Amrita Telemedicine Network brings specialized consultations to patients who are geographically dispersed, right to their front doors
<i>FORTIS Healthcare Group</i> (Fortis Tele-consult 2022)	Telemedicine consultations for 23 hospitals throughout India’s FORTIS Network The MS Teams Enterprise collaboration solution allows for video and teleconsultations between patients and specialists. Choosing a hospital and specialization is made easier for patients by a landing page on the FORTIS website. In a virtual lobby, the FORTIS call center schedules an appointment and a consultation online After the consultation, the prescription is posted on the platform and sent to the patient’s email address in addition to being sent The patient receives the e-appointment and the payment link through SMS

Source Authors’ compilation

3.7 Technology Platform and Health Information Considerations

Developed nations like the USA perform telemedicine visits using a platform that complies with the Health Insurance Portability and Accountability Act (HIPAA). Encryption, access limits, and audit logs are all possible with HIPAA-compliant video conferencing software. Encryption hides sensitive data into a format that is unintelligible without a decryption key, preventing unwanted access to protected health information (PHI). Access controls make use of individual login credentials to enable actions to be ascribed to certain users, who are granted access to PHI at different levels according to their work functions. Unauthorized access to PHI can be quickly identified thanks to audit logs that keep track of who accesses what data and for how long.

India is currently creating a safe framework for consent-based data sharing. It has undergone evaluation in the finance industry. The foundation of Data Empowerment and Protection Architecture (DEPA) is a paradigm change to give people control over their data based on consent. DEPA gives people secure, easy access to their

data so they can share it with other organizations. The Reserve Bank of India has created a new consent manager institution called an account aggregator to ensure that people can consent to the sharing of their data and to protect their privacy rights. The consent manager determines the data flow from data sources to data users in an authorized system through consent logs. Consent managers continue to be data blind. The account aggregator will encrypt the data that passes through it (NITI Aayog 2020). In their capacity as consent managers, they facilitate data exchange between Financial Information Providers (FIP) and Financial Information Users (FIU).

Similarly, the Ayushman Bharat Digital Mission would support a platform for the digitization of health records of Indian residents and the distribution of such records to both public and private hospitals, testing facilities, and pharmacies. A digital infrastructure called the National Health Stack intends to strictly simplify the gathering and sharing of complete healthcare data securely and privately. To connect health data across the public and private sectors, the National Digital Health Blueprint (NDHB) proposal anticipates the architectural framework and infrastructural required. The NDHB will promote a cutting-edge digital health ecosystem that encompasses telemedicine, digital therapies, and digital diagnostics in addition to health digitalization (Ranganathan 2020).

The following are the three prerequisites for the effective completion of the NDHB exercise: (i) nationwide availability of Internet and telecommunications; (ii) a vast network of primary healthcare facilities for service delivery; and (iii) qualified medical personnel. In India, all three are ongoing projects. These require ongoing money, support for execution from public policy, and both.

3.8 Telemedicine Application Areas in India

Medical practitioners have access to a wide range of platforms for consultations and investigations through telemedicine and its different branches, which also serve as an important teaching resource. With the help of telemedicine, patients can access a wide range of therapeutic alternatives, such as primary care consultations, psychotherapy, physical therapy, and many more. Researchers and medical experts have worked hard to broaden the applications of telemedicine in the healthcare field. The following details are taken from reviews of the various fields of telemedicine and their applications in Indian-published articles:

- i. **Telecardiology:** Telecardiology has been utilized to transmit electrocardiograms while also consulting with cardiologists (ECGs). The main technique for imaging the heart makes use of portable ultrasound scanners. The diagnostic quality of these devices' screens allows for the display of high-resolution echocardiographic pictures for diagnosis and therapy advice. Extended Cardiac Telerehabilitation (CTR) contacts may be beneficial and cost effective for higher-risk individuals (Sharma et al. 2022).

- ii. **Telepsychiatry:** Asynchronous (sending medical records for an expert opinion) or synchronous (doing things in real time) formats are frequently used in telepsychiatry. More people use video teleconferencing, which uses the synchronous, two-way, interactive communication model (VTC). The ethical and legal obligations and procedures set forth by the Indian Telemedicine Guidelines for psychotherapy are comparable to those for face-to-face therapy. Patients from any region of India may receive teletherapy from a psychiatrist. Most adolescents made the transition from in-person to online psychotherapy without any problems, especially since they had already developed a connection with their therapist in person. Some adolescents, particularly those with social anxiety disorder, found that tele-psychotherapy's distance and sense of "remoteness" allowed them to communicate more freely than when they visited the outpatient clinic for sessions (Galagali et al. 2021).
- iii. **Telepathology:** The process of sending digital pathology images of microscopic or gross findings across telecommunication networks to distant viewing locations for diagnosis, storage, or teaching is known as telepathology. Telecytology is one of the many domains where telepathology is used. Diagnostic cytopathology carried out using digital images is referred to as "telecytology." A pathologist who is not at the site of the operation can be consulted during the operation using this method. To acquire tumor-free margins and avoid unnecessary excision, the processes of impression biopsy, frozen sections, and digital imaging might be combined. It is most frequently used to seek a second opinion, i.e., cytology expertise, by sending photos from locations with limited resources or by expediting the consulting process. The assessment of thyroid fine-needle aspiration specimens (fine-needle aspiration cytology) has also made use of telecytology as a tool for quality assessment and improvement (Nishat et al. 2017).
- iv. **Teledermatology (TD):** TD combines information and communication technology to do remote research, diagnose, monitor, treat, and educate patients. The primary type of TD is when a patient speaks with a dermatologist or general practitioner directly. The secondary TD describes the patient and specialist's indirect communication. The tertiary TD describes a second opinion between two dermatologists who specialize in different areas of dermatology. The most fundamental criterion for a TD diagnosis is a good image. Dermoscopic pictures are employed in teledermoscopy for remote consultation and decision-making. In many healthcare settings, TD is now standard practice for skin cancer triage. Additionally, TD links dermatologists with one another to improve knowledge sharing (Pasquali et al. 2020).
- v. **Teleoncology:** For cancer patients, telemedicine has replaced in-person consultations with real-time audio-visual encounters. During the pandemic era, cancer doctors made decisions based on the best available evidence and took multidisciplinary management into account. Telemedicine applications for radiation treatment planning exist on three levels. For consultation and the presentation of radiation images and dose plans, Level 1 offers video conferencing. Replication of a subset of the radiation database's data at Level 2 allows for remote

treatment planning and evaluation. Remote operations in real time are included in Level 3. Palliative care patients for cancer preferred telemedicine appointments, which they attributed to the comfort and security of their own homes. Telemedicine can significantly improve the therapeutic, palliative, preventive, and, to a certain extent, promotional aspects of health care (Agrawal et al. 2011; Sekaran et al. 2022; Yadav et al. 2021).

- vi. **Teleneurology:** The use of telemedicine is growing across a broad spectrum of neurologic illnesses. Telemedicine in the treatment of stroke has proven to be secure. The telestroke network's standardization of stroke therapy ensures quality improvement. In hyperkinetic movement disorders, it has been demonstrated that remote clinical evaluation is possible. Additionally, counseling-based therapeutic therapies such as cognitive testing, genetic counseling, and others have been used (Ganapathy 2020).
- vii. **Telepathology:** There are three different types of telepathology: hybrid, dynamic, and static (also known as store and forward or real time) (or virtual). Telepathology enables non-pathologists to undertake some emergency pathological tests, such as intraoperative frozen sections. A pathologist reviews the gross after the laboratory technician has processed the material locally. The pathologist will give the technician some instructions via a monitor at the same time. The pathologist can then review digital photos and give his diagnosis over the phone. A pathologist in another place can be consulted through telepathology. Even without a pathologist present during surgery, tumor-free margins can be identified in a way that spares surrounding tissue (Feroz et al. 2020).
- viii. **Telemedicine in pediatric nephrology:** The diagnoses were divided into the following categories: idiopathic nephrotic syndrome, chronic kidney disease, kidney transplant, urinary tract infection, acute glomerulonephritis, acute kidney damage, and others. Pediatric nephrologists can utilize telemedicine for new patients, follow-up patients, second opinions, and cross referrals (Gulati and Sengar 2021).
- ix. **Telemedicine for diabetics:** Diabetes is a chronic condition that necessitates periodic doctor visits for lifestyle recommendations and treatment alterations. Telemedicine enables patients to consult with their doctor at home, reducing the risk of coronavirus infection and keeping them away from hospitals. Interacting with the patient, examining their medical history, examining their self-monitored blood pressure (SMBP) and self-monitored blood glucose charts (SMBG), and offering recommendations are all things that doctors can do (Ghosh et al. 2020).
- x. **Telemedicine in diabetic retinopathy:** Ophthalmology is ideally suitable for telemedicine and telescreening due to its high visual and image-intensive nature. When a patient visits their doctor or a diabetologist for a routine checkup, the fundus pictures might be taken. This form of opportunistic screening aids in better patient screening. The fundus images captured with a non-mydratic digital retinal camera are then sent to a reading and grading facility via the Internet, where a retinal specialist or a certified grader remotely

reads them. An ophthalmologist at a remote site reads the photographs, creates a report on the status of the retinopathy, and suggests the next steps. This report is then sent through the Internet to the patient's location from where the original images were taken (Das et al. 2015).

- xi. Telemedicine in urology: Telemedicine aids in establishing a comfortable environment for the clinician and patient to talk about delicate subjects like impotence and infertility. Additionally, telemedicine has made it possible to treat urologic issues that are connected to sexual health in a way that is comfortable for the patients. The reduction in carbon footprint associated with such a switch from routine clinic visits was another significant benefit of telemedicine, highlighting the fact that it can assist promote a more environmentally friendly clinical practice (Naik et al. 2022).
- xii. Teledentistry: Pediatric patient behavior counseling, pediatric patient diagnosis and monitoring over long distances with limited access to dental care, and pediatric patient oral health promotion are all made possible with the use of teledentistry. Teledentistry has many applications, such as “tele-triage,” “teleconsultation,” “telediagnosis,” and “telemonitoring.” “Tele-triage” helps to prioritize the patients who need urgent care by doing a remote assessment of the pathology, ensuring that patients have safe access to dental care. Telediagnosis uses photos to diagnose oral pathologies from a distance. Patients no longer require extra travel thanks to telemonitoring, teleconsultation, and tele-triage, especially those in remote areas who struggle to get dental care because of socioeconomic and geographic limitations (Sharma et al. 2021).
- xiii. Telemedicine in nephrology: The use of video-based telemedicine for routine kidney treatment is expanding around the world and is well-liked by patients with kidney diseases of all types. Teleconsultation increased patients' access to care, assisted in diagnosis, and enhanced their quality of life. The majority of the telenephrology experience in India is restricted to peritoneal dialysis patients, where it has been demonstrated to improve five-year survival rates, particularly in the rural population (George et al. 2022).
- xiv. Telemedicine in orthopedic: In orthopedic, telephonic call-based telemedicine can be utilized successfully as a medium to continue patient follow-up with patient satisfaction. When rating patient symptoms and delivering the adjusted treatment, the automated mobile text response-based tools can be useful. Patients can “save and forward” their performance in the form of photographs when requested to conduct maneuvers based on graphical knowledge. This forms the basis for a virtual clinical evaluation (Kumar et al. 2020).

3.9 Barriers to the Adoption of Telemedicine

Beginning in the early 2000s, several pilot initiatives introduced telemedicine to the Indian healthcare system. However, it did not reach its full potential (Chandwani and Dwivedi 2015; Devanbu et al. 2019; Ateriya et al. 2018) until the COVID-19

pandemic started. The eSanjeevani platform was the missing link, together with the legal framework and telemedicine guidelines.

In 2019, the Government of Andhra Pradesh laid the groundwork for public digital health in India through eSanjeevani, a free telemedicine program. Prior pilot programs were unable to grow due to the lack of an enabling policy and regulatory framework. In India, for instance, the absence of legal and administrative frameworks, the lack of clarity on the deployment of telemedicine modalities for healthcare service delivery, and the healthcare professionals' resistance to adopting emerging developments in information and communication technologies all contributed to the scaling up of earlier successful telemedicine initiatives (Standing et al. 2018).

Together, several enabling variables are set up to benefit patients and healthcare professionals. Both technological and non-technological problems were among them. The technical sphere of medicine in telemedicine can never be divorced from the reality and significance of the subjects, which are patients and medical professionals. As a result, their individual experiences are a crucial component of the non-technological difficulties related to the scaling up and implementation of telemedicine. Technology barriers make up a small portion of them. The scaling of technology-enabled healthcare is typically hampered by non-technological hurdles.

India is in a good position to build up telemedicine adoption and make the switch to a digital healthcare system. For instance, India is one of the digital consumer markets with the quickest rate of growth, with more than 0.5 billion Internet members utilizing more than 8 GB of data per month. Its data charges are among the lowest in the entire world (Kaka et al. 2019). According to Pew Research Centre research, Internet usage and smartphone and mobile phone ownership have both increased steadily in India during the past ten years (Poushter 2016). In addition to the Bharat Net Program's investment in public infrastructure, Bharat Broadband Network Limited (2022) aims to extend the fiber network to all Indian villages by 2025. By 2026, India is expected to have more than a billion smartphone users (Deloitte 2022). Besides, 5G is predicted to account for approximately 40% of mobile subscriptions in India by the end-2027. The smartphone users in India are forecasted, by end-2027, to consume 50 GB/month data on average.

Technology-enabled consent-driven architecture addresses issues including fraud, abuse, and privacy loss. Any of these problems could lead to patients losing hope and feeling unsatisfied (Acharya and Rai 2016).

Telemedicine is mostly used by doctors. Their ability to recognize, understand, and accept the technology-enabled patient interface is crucial to their success. Healthcare personnel is pushed outside of their comfort zones by telemedicine. It represents a change from established patient care practices to novel, untested medical procedures. It deprives the doctor of being close to and speaking with the patient directly.

These non-technological concerns may have a significant impact on how physicians view technology as well as how they will employ telemedicine for patient care (Bakshi et al. 2019).

The COVID-19 pandemic showed that telemedicine was a practical way to reduce the perceived risk of infection to medical staff, patients, and visitors. Telemedicine facilitated prompt access to healthcare professionals, decreased travel-related time,

expense, and infection risk, decreased consultation wait times from the comfort of home, and boosted home-health care. According to the McKinsey Global Institute, telemedicine technology might help India save between US \$4 and US \$5 billion annually. Additionally, it claimed that telemedicine might take the place of half of India's in-person outpatient sessions.

To scale telemedicine safely and effectively, it is important to grasp the strategic, operational, and tactical issues involved as well as the practical challenges that patients and frontline healthcare providers face every day (Gudi et al. 2021).

Scott Kruse et al. (2018) stressed the importance of skill development, change management initiatives, and alternate delivery methods like telemedicine for overcoming technological barriers and a lack of computer literacy. These, together with one-on-one, trustworthy patient-provider interactions, were proposed as a realistic course of action in India (Raj Westwood 2021).

According to Nagaraja et al. (2022), urban doctors' adoption of telemedicine was better than that of rural. However, the doctors were equally distributed across public and private healthcare systems. This is encouraging for telemedicine adoption as a low-modality solution to narrow the healthcare delivery gap between the public and private sectors, provided that a common patient identity can be used to frequently gather data on healthcare utilization and results. National Health Stack is likely to solve this issue. A large proportion of telemedicine-participant doctors felt that reforms in health insurance toward telemedicine prescriptions and home care can contribute to a greater spread of digital health in India.

A recent study in India using telemedicine with children and adolescents highlighted the necessity for parents to broaden their perspectives to give adolescent patients with the healthcare provider quality time and space. The distance and remoteness of telepsychotherapy were more comfortable for adolescents with social anxiety disorder. In comparison with in-person sessions at the outpatient clinic, the patients were able to speak more freely. Functional behavioral analysis for the management of behavioral issues and educating parents to coach kids to gain new skills in various developmental domains were among the interventions successfully delivered through telemedicine (Galagali et al. 2021). Patients' satisfaction with telemedicine is largely influenced by how much they trust their doctor and how long the video consultation takes (Orrange et al. 2021).

3.10 Prospects of Telemedicine in India

The COVID-19 pandemic spurred a huge innovation effort in the policy, regulatory, and technology arenas in Indian healthcare systems. Progressively, Indians have come to rely on digital technology for receiving healthcare during the extended lockdown. A series of congruent enabling factors ensured the widespread adoption of telemedicine. It is viewed as a panacea for improving access, affordability, and quality of health care as well as bridging the urban-rural gap due to inequitable distribution of healthcare infrastructure.

Healthcare policymakers and leaders, however, need to respond to several interlinked challenges to ensure that

- i. Telemedicine implementation embraces continuous improvement and offers health outcome the customers value, and
- ii. Leaders dynamically review and address factors that determine the large-scale adoption of telemedicine-enabled healthcare pathways in complex, diverse, and risk-prone contexts prevalent in India.

The emergence of 5G coupled with digital technologies like artificial intelligence (AI), Internet of Things (IoT), Machine Learning (ML), augmented reality and virtual reality (AR/VR), and blockchain exerts more pressure on healthcare leaders to design patient-centric delivery processes. Physicians and patients are keenly interested and open to using emerging digital technologies to solve healthcare challenges in newer ways. The willingness to explore alternatives demonstrates the flexibility of both healthcare providers and consumers to new service modalities.

Healthcare insurers and providers need to get back to the drawing board to redesign digital experience with innovative business models that amplify personal agency and consumers' capacity for informed consent. They want to feel comfortable with how their health-related information is used and want some control in the process. Healthcare providers can treat their erstwhile passive clients as active participants by transforming one-way experiences into truly empowered collaborators. This could help providers differentiate in a healthcare domain that is progressively becoming virtual. Healthcare leaders can shape the future of emerging digital health. Some of the actions are outlined in the next section.

- i. Focused study of the patient–clinician interface to develop an organizational mechanism for monitoring and evaluation of the impact of telemedicine. To develop health outcome measures and comprehensively assess end-user acceptability.
- ii. It is imperative to initiate a research for deeper understanding of the healthcare professionals' perceptual risk associated with telemedicine through different pathways—allopathy, Indian medicine systems, and homeopathy. The telemedicine guidelines and workflow processes could then undergo regular review and reforms to address unaddressed and emerging customer needs.
- iii. In a similar vein, research on Indian patients and attenders who help with telemedicine-enabled exchange with healthcare professionals will help in defining issues to mainstream telemedicine for unreached and unheard patients. The results will help in improving access to healthcare through better graphical user interface (GUI) design, especially for resource-poor segments of patients.
- iv. It is now widely accepted that approximately 80% of the Indian population is dependent on non-allopathic medicine (Gogtay et al. 2002). Therefore, it is imperative to examine the role of telemedicine in delivering non-allopathic care through alternative healthcare pathways.
- v. Given the wide diversity in the Indian healthcare systems, there is an urgent need to assess the design and implementation of perspective building and skill enhancement at the organizational and individual levels of learning.

- vi. A congruent organizational capacity building is to enhance process documentation, communication, and tailoring governance guidelines to distinct stages of healthcare infrastructure maturity prevalent in the Indian Union of States (NITI Aayog 2021b).
- vii. Continued emphasis on National Health Stack on consent-based architecture is the sine qua non to ensure the success of the digital health India movement without undermining privacy and security risks perceived by the end-users.
- viii. Since telemedicine is an evolving field in India, it is critical to incorporate digital health in the educational curriculum to prepare future-ready healthcare professionals and leaders.
- ix. With wider Internet availability in rural India, it is imperative to develop clear guidelines for accessing telemedicine-enabled healthcare through scheduled local Indian languages. This is likely to improve affordable access to health care through the population-scale adoption of telemedicine.
- x. India has a rich experience with several technology-enabled telemedicine initiatives in both public and private healthcare sectors. It is critical to review and assess by design and unanticipated variations in access, affordability, and health outcomes linked to telemedicine use. Identifying variability due to design issues will help in scouting and defining the next practices that can be adapted to diverse contexts to scale telemedicine across divergent healthcare pathways. Outlining unanticipated variabilities will help in becoming sensitive to health inequalities and inequities. Subsequent malady-remedy analyses could help in resolving such issues.
- xi. It is useful while studying heterogeneity, to embrace a systemic and holistic perspective across micro-, meso, and macro-levels of Indian healthcare systems. This will help in taking cognizance of multiple dimensions of influencing factors that shape telemedicine-delivered health outcomes.
- xii. Interoperability and seamless integration of multiple digital platforms through a consensus on operating standards will certainly influence the emergence of telemedicine as a pragmatic option for healthcare delivery, at the meso-level.
- xiii. In fine, addressing implementation challenges due to patchy and unreliable Internet connectivity in Tier-II and Tier-III towns and villages could be a major boost to telemedicine at the macro-level. In addition, a nuanced refinement of regulatory frameworks and guidelines will assist in the scaling of telemedicine services in India.

3.11 Conclusion

As the Indian healthcare systems undertake a transformative journey at the population scale, it is imperative to assist professionals across allopathy, Indian medicine systems, and homeopathy to understand both technological and non-technological issues that aid in the effective design, implementation, and continuous improvement

and optimization of telemedicine modalities in the context of rapidly evolving technological arena. There is a need to continuously monitor and establish congruence among the policy-practice-people-technology nexus for digital health transformation in India.

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Chapter 4

Carrot or Stick: Impact of Pandemic on M-Payment Adoption—Evidence from Emerging Market



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4.1 Introduction

The spread of the Covid-19 pandemic across the globe has challenged traditional business methods and has given way to various innovative digital alternatives. It has altered people's perspectives on life and work. Because of this change, contactless transactions and social isolation have taken center stage in our daily lives. If we look at how we spend our money daily, we can see that digital payment methods experienced a meteoric rise in popularity after the lockdown. From November 30, 2020 to August 6, 2021, digital transactions in India increased by 80%, with most of this growth coming from Tier II and III cities, as reported by Razorpay (PTI 2021). These numbers show that digital payment systems are becoming increasingly popular, especially in the country's Tier I and III cities. Financial institutions and industry participants in the payment sector have also observed that customers are not likely to return to traditional banking or cash payments now that digital payment systems are embedded in people's daily lives. Despite low internet connectivity and smartphone usage, digital payment systems are expected to increase further in semi-urban and rural areas as the economy opens up post-covid, and offline transactions are sorted out to suit the social distancing norms (Surabhi 2021). As people become accustomed to living apart from one another, they will increasingly turn to online

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banking and other forms of FinTech (Beaunoyer et al. 2020). It will be interesting to see how quickly and widely consumers adopt new FinTech applications.

Using a unique data set on customer adoption of digital payment systems in a pre- and post-covid scenario, this article aims to determine how, from the pre-covid to the post-covid period, the variables influencing consumers' desire to adapt to digital payments have varied.

The paper is structured as follows: the next section outlines the theoretical context of digital payment adaptation, followed by a section on the development of the hypothesis. The subsequent section focuses on the research methodology adopted and presents the results and implications. The final section concludes the study with limitations and future research directions.

4.2 Literature Review

Scanning the literature, we found that researchers have examined mobile banking from multiple perspectives, including the technology acceptance model (TAM) and its derivative models. These models identified antecedents such as usefulness, ease of use, credibility, and financial cost, as perceived by consumers, and self-efficacy that impact users' mobile banking intention (Luarn and Lin 2005). Similarly, Crabbe et al. (2009) highlighted that facilitating conditions, demographics, and perceived credibility impact users' intention to adopt mobile banking services.

According to research by Kim et al. (2009), structural assurance, a firm's reputation, and a user's trust propensity are the main drivers contributing to the initial confidence level in mobile banking. Advancing the TAM models to fit the advances in the understanding of technology adoption led to the genesis of the Unified Theory of Acceptance and Use of Technology (UTAUT) model (Venkatesh et al. 2003). This unified theory derived its understanding from major theories like the Theory of Reasoned Action, TAM, and Social Cognitive Theory, to name a few. The antecedents, like expectations on the system's performance, expectations on the user efforts, facilitating conditions, etc., influenced users' technology adoption greatly. UTAUT has attracted the interest of researchers and has been used recently to investigate user acceptance of mobile technologies (Carlsson et al. 2006; Min et al. 2008; Park et al. 2007). Evidence from research (Thakur 2013; Williams et al. 2011) shows how demographic factors like age, experience, and openness to change influence user behavior.

It was observed that users' tendency to adopt a technology will be higher if it matches their needs in performing the task. This led researchers to include the Task Technology Fit (TTF) in UTAUT (Zhou et al. 2010). Incorporating characteristics of innovation diffusion along with users' perception of the system's security and intention, researchers (Oliveira et al. 2016) expanded the field of study. They suggested a better model integrating the advantages of the UTAUT2 (advancing UTAUT). The study was built on the premise that people's receptivity to new technologies is a complicated phenomenon that requires the use of many models to fully understand

the underlying causal mechanisms (Jackson et al. 2013; Shen et al. 2010). According to Zhou et al. (2021), the low switching cost of mobile banking services combined with the high cost of acquiring new customers necessitates that service providers place a premium on customer retention and make it easy for them to keep using the service. The study also found that participants were more satisfied with their experiences when accessing high-quality information and systems. Therefore, service providers must improve the user experience to promote continued usage of mobile banking. Furthermore, the level of security in these transactions has become a significant concern for adoption because mobile banking or payment services are related to dealing with financial information.

Reviewing the literature, we observed that incentives and threats play a critical role in consumers' adoption decisions (Coward et al. 2008). So, there is a need to extend the UTAUT and TTF model to identify the detractors of innovation or technology adoption. According to Chen et al. (2016), combining models improves predictive ability. A similar approach was adopted by Shivdas et al. (2020) to analyze the adoption of digital library systems. Further, past research has studied technology acceptance at a fixed time. The impact of shocks on technology adoption is limited or scant. Therefore, by integrating the elements provided by the seminal research, this study aims to add to the body of knowledge (Oliveira et al. 2016; Zhou et al. 2010, 2021) and propose an integrated model for user adoption decisions on mobile payment systems.

4.3 Hypothesis Building

After identifying the research gap and the need to address it, we revisited the literature to learn more about why people use or do not use mobile payment systems. The literature continuously emphasizes the importance of mobile banking apps in our everyday lives. Several studies have identified the aspects that significantly impact one's decision to embrace mobile payment systems. Al-Dmour et al. (2020) found that people who used mobile banking apps in Jordan shared a few commonalities in their perspectives on fashion, leadership, family, health, carefree living, and community involvement.

Among other drivers, EU, mobility, and attitude are crucial to making GoPay acceptable as a mobile payment in Indonesia, as Chandra et al. (2018) observed in the context of GoPay. The most significant influencing factors regarding users' inclination to utilize M-payments are perceived benefits and perception of trust (Chin et al. 2020). As per Fan et al. (2018), factors such as "payment culture," "uncertainty avoidance," "security measures," "security rules and policies," and "security responsibility commitment" (SRC) enhance consumers' opinions of security and their propensity to believe in mobile payment solutions. The transfer of cognitive and emotional trust from web payment to mobile payment services is also improved by perceived entitativity, which boosts both cognitive and emotional trusts in mobile payment, as indicated by Gong et al. (2020), which looked into the transfer of trust

from web payment (WP) to mobile payment (MP) services and found that it can happen.

When analyzing the impact of the covid-19 outbreak on Indonesian consumers' perceptions about the use of mobile payments (M-payments), Immanuel and Dewi (2020) found that personal attitude, the influence of the situation, and an individual's knowledge influence M-payment use. According to a study by Kalinić et al. (2019), who aimed to look at the moderating impacts of gender on the acceptability of peer-to-peer (P2P) mobile payments, males are less impacted by the possible hazards connected with them and are more inclined to utilize them than women. Moreover, men are more prone to being swayed by their peers, while women are more likely to be inspired by their originality and creativity.

A recent study model put out by Liébana-Cabanillas et al. (2018) indicates that when predicting whether or not a user would utilize mobile payments, factors related to the perception of utility and security have the most significant effect. When Loh et al. (2020) examined the causes for the sluggish acceptance of mobile payment from the standpoint of switching intention, they discovered that perceived security and privacy are significant drivers of switching intention, but trust is not. According to an examination of direct and indirect connections between trust, perceived benefit, perceived risk, and reuse intention conducted by Narahdita et al. (2020), researchers discovered that trust exerts an influence directly opposite to the perceptions of benefit, risk, and intent to reuse. On the other hand, the trust-intention-to-reuse relationship is partially mediated by the perceived benefit, which is directly influenced by the perceived benefit. Park et al. (2019a) examined the variables that affected people's inclination to utilize mobile payment services. They discovered that social pressure and fear of technology might make people less ready to take advantage of the many benefits these services offer. The other three benefits—convenience, enjoyment, and economic—have a positive effect on attitudes, while the fourth, experiential benefit, has a negative effect.

Research by Park et al. (2019b) found that consumers' expectations of security and reliability are negatively related to their intent to use mobile payments. In contrast, expectations of convenience and reliability are positively related. In addition, the degree to which one's education impacts the relationships between perceived risk and intention to use mobile payments and between trust and intention to use M-payment serves as a mediator between these two sets of variables. According to Patil et al. (2020), who identified the key factors influencing consumer adoption of mobile payments in India, performance expectations, usage intentions, and grievance redressal are important positive predictors of consumer use behavior for mobile payments. Additionally, attitudes, social influence, and favorable circumstances were all highly reliable indicators of future usage.

Researchers also noted factors like compatibility, the mobility of the user, and subjective norm (Schierz et al. 2010) influence technology acceptance. Adoption readiness moderates the association between technological preparedness and the intention to utilize mobile payments, according to a study by Sinha et al. (2019). Privacy concerns have a negative moderating influence on the relationship between adoption preparedness and intention to adopt. Sobti (2019) added perceived cost,

perceived risk, and the demonetization effect to the UTAUT model. Age serves as a moderator, suggesting that younger users place a higher value on mobile payment services' user-friendly design and are more affected by their friends and society when selecting whether or not to utilize such services. According to Sreelakshmi and Prathap (2020), acceptance and confirmation of mobile-based payment services were strongly impacted by the health belief model components of perceived severity, perceived vulnerability, and self-efficacy. According to research by Zhao and Bacao (2021), during covid-19, users' intent to use mobile payment is impacted by both their technological and mental views, with users' assessments of the advantages being significantly influenced by their peers' judgments and their degree of confidence in the system.

Based on the research we conducted, we concluded that the following factors significantly impact users' intentions to adopt and actual adoption of mobile payment systems: Task Technology Fit; trust; satisfaction; habit; Performance Expectancy; Effort Expectancy; social influence; hedonic motivation; facilitating condition; perceived technology security; perceived cost; and system quality. We are putting up a new model for end-user acceptance of mobile payment systems based on the results of these studies. The model is displayed in Fig. 4.1.

Task Technology Fit (TTF): When a user uses information technology to complete jobs more quickly, and more effectively, this is referred to as TTF (Zhou et al. 2010).

Performance Expectancy (PE): It is the extent to which users think utilizing a technology would enhance their capacity to complete a certain set of activities (Oliveira et al. 2016). Many individuals think that by utilizing mobile payment options, they will be able to acquire goods and services more quickly and easily.

Effort Expectancy (EE): Effort Expectancy measures how simple consumers believe technology to be. Customers' expectations for achieving the desired performance (Oliveira et al. 2016) are raised when they believe that mobile payment is simple and does not demand a lot of effort on their part. This framework is useful for estimating how likely a user is to adopt a novel piece of technology.

Social Influence (SI): The term "social influence" describes how persuaded consumers feel that they should adopt a certain piece of technology based on the opinions of those around them. The influence of the user's social network, including their peers and superiors, on their propensity to adopt a new practice is reflected in this concept. If it is a good one, it could sway the customer to try out mobile payment services (Oliveira et al. 2016).

Facilitating Conditions (FC): These relate to what a customer anticipates from the tools and assistance offered to carry out a habit (Oliveira et al. 2016).

Hedonic Motivation (HM): The enjoyment one receives from making use of a technological device is known as hedonic motivation. Consumer technology adoption and use have been proven to be significantly influenced by hedonic motivation. The reason why mobile payment is quickly gaining popularity is that it is both convenient and fun to use (Oliveira et al. 2016).

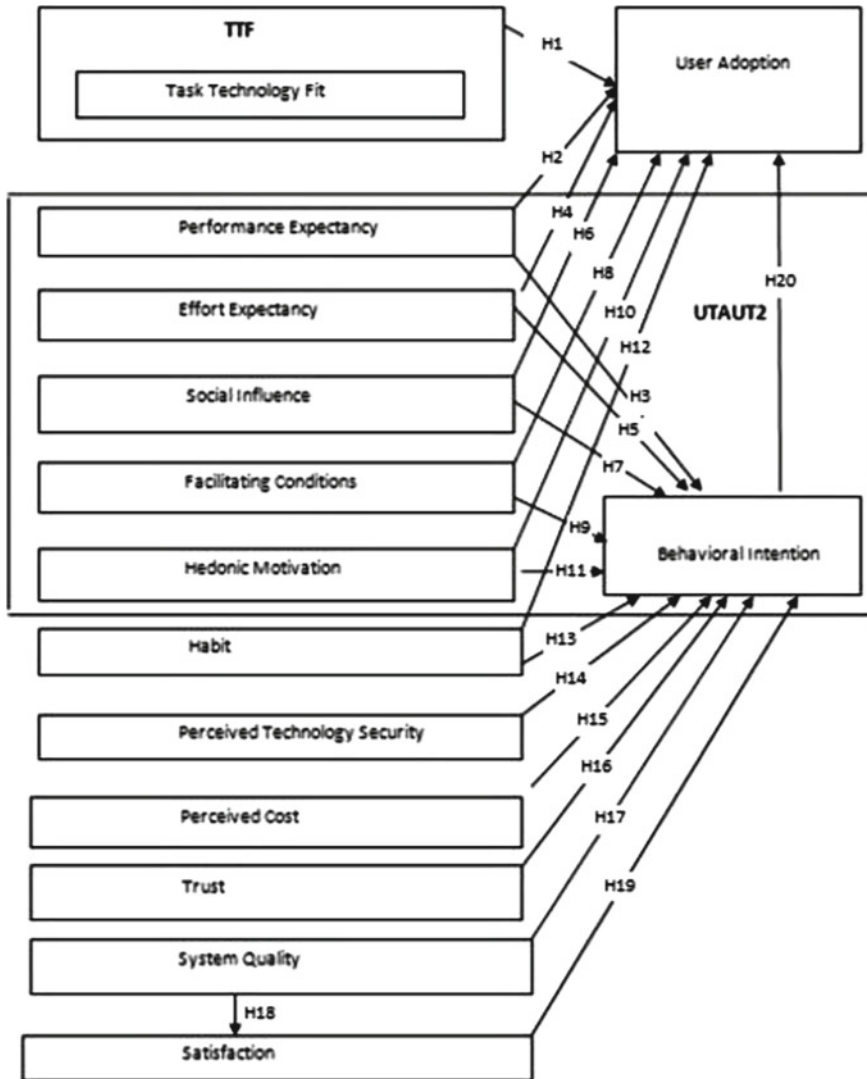


Fig. 4.1 Proposed research model. Source Author’s work

Habit (HB): The term “habit” is used to describe the extent to which previously learned behaviors are performed automatically. Habit has been operationalized using both past behavior and the degree to which a person believes the behavior to be automatic (Venkatesh et al. 2003).

Perceived Technology Security (PT): The term “perceived technology security” (PT) is used to describe how comfortable a person is with using their mobile device to make monetary transactions. It is crucial that worries about mobile payment technology

can be kept to a minimum. Customers are more likely to adopt mobile payment systems if they believe those systems to be safe (Oliveira et al. 2016).

Perceived Cost (PC): The consumer's expectation of future subscription, transaction, and communication fees is known as the "perceived cost" (PC). Additionally, the availability of mobile devices suitable for use with the mobile payment service is a necessary condition (de Sena Abrahão et al. 2016).

Trust (TR): When one person puts their faith in another, they open themselves up to the possibility of being hurt or let down. Consumers' openness to using mobile payment services is significantly impacted by the level of trust they have in the technology. According to studies, it not only affects users' intentions but also determines whether or not they will continue using the service (Qasim and Abu-Shanab 2016).

System Quality (SQ): It is "the intensity with which users find the systems to be easy to use, connect and learn, and enjoyable to use" (Petter and McLean 2009).

Satisfaction (SAT): The term satisfaction describes the overall emotions resulting from several mobile payment exchanges (Zhou et al. 2013).

User Adoption (UA): User adoption results from increased payment ease and effectiveness while utilizing mobile payment, as well as from the simplicity of learning to use mobile payment skillfully (Zhou et al. 2010).

Behavioral Intention (BI): It describes a consumer's purpose to utilize a product or service effectively in the future (de Sena Abrahão et al. 2016).

Task Technology Fit (TTF), in addition to the UTAUT model's characteristics, is crucial for the broad acceptance of mobile payment systems, according to Zhou et al. According to research results, users were more inclined to accept new information technologies if such technologies met their demands and made it easier for them to conduct their tasks. As a result, this research formulates the following hypothesis on how users embrace mobile payment methods both before and after covid.

Hypothesis 1: Task technology fit impacts the user adoption to adopt Google Pay.

Performance expectations, among other variables, have an impact on user adoption and usage of digital technologies, as identified by Venkatesh et al. (2003) while developing the Unified Theory of Acceptance and Use of Technology (UTAUT). Similar views were arrived by Patil et al. (2020), who argued that consumers' high expectations of the service's performance, their willingness to use it, and the availability of channels to air complaints all play a role in determining how frequently they use their mobile devices to make purchases. As a result, this research proposes the following hypotheses to examine the impact of the covid on users' propensity to adopt contactless payment systems like Google Pay, both before and after the introduction of the covid.

Hypothesis 2: Performance expectancy impacts the user adoption to adopt Google Pay.**Hypothesis 3: Performance expectancy impacts the behavioral intention to adopt Google Pay.**

Users' expectations of how much work it will take to learn and implement a new IT system affect how often they use it, as noted by Venkatesh et al. (2003). Moreover, Oliveira et al. (2016) provided supporting evidence, stating that users have higher expectations of achieving the desired performance when they perceive mobile payment to be effortless and straightforward. Thus, we hypothesize:

Hypothesis 4: Effort expectancy impacts the user adoption to adopt Google Pay.**Hypothesis 5: Effort expectancy impacts the behavioral intention to adopt Google Pay.**

In addition to user expectations about effort and performance, Venkatesh et al. (2003) discovered that social influence is crucial in the adoption of mobile payments. Like what we see here, Park et al. (2019a) noted that social pressure and fear of new technologies can mitigate otherwise realized benefits of mobile payment systems. Both Patil et al. (2020) and Zhao and Bacao (2021)—two recent studies—emphasized the significance of social impact and enabling environments in determining people's inclinations to use mobile payments. Therefore, we hypothesize:

Hypothesis 6: Social influence impacts user adoption to adopt Google Pay.**Hypothesis 7: Social influence impacts adoption intention for Google Pay.**

Studies by several researchers (Crabbe et al. 2009; Patil et al. 2020; Venkatesh et al. 2003), including a recent study by Sobti (2019), strongly support that facilitation conditions have an influence on the adoption of digital payments. Therefore, we hypothesize:

Hypothesis 8: Facilitating conditions impact user adoption to adopt Google Pay.**Hypothesis 9: Facilitating conditions impact behavioral intention to adopt Google Pay.**

Park et al. (2019a) discovered that convenience, fun, and financial advantages had a favorable influence on users' opinions regarding using mobile payment systems.

Hedonic Motivation, which Oliveira et al. (2016) defined as the enjoyment one gets from using technology, has been found to be a driving element of intention to use and adopt the technology. Mobile payment is more likely to be adopted by users since it is an innovative method of conducting financial transactions and because they like using it (Oliveira et al. 2016). By considering these facts, this research proposes the following hypotheses about the spread of Google Pay:

Hypothesis 10: Hedonic motivation impacts the user adoption to adopt Google Pay.

Hypothesis 11: Hedonic motivation significantly affects the intention to adopt Google Pay.

According to Venkatesh et al. (2012), the user's decision to embrace a mobile payment system is influenced by their usage habits with that system. Therefore, this study wants to test the following hypothesis in the case of Google Pay.

Hypothesis 12: Habit significantly affects the user adoption to adopt Google Pay.

Hypothesis 13: Habit significantly affects intention to adopt Google Pay.

According to Oliveira et al. (2016), customers are more inclined to use mobile payments if they have a high level of confidence in the security of the mobile devices handling their financial transactions. Thus, we hypothesize:

Hypothesis 14: Perceived technology security influences the user's intention to adopt Google Pay.

Hypothesis 15: Perceived cost influences the user's intention to adopt Google Pay.

Studies by Qasim and Abu-Shanab (2016), Kim et al. (2009), Chin et al. (2020), Gong et al. (2020), Loh et al. (2020), Fan et al. (2018), Park et al. (2019b) said that users' intentions to use mobile payment systems include trust as a key factor. Hence, we state that:

Hypothesis 16: Trust significantly affects users' intention to adopt Google Pay.

According to Zhou et al. (2013), the ease of use (EU) and speed of access (EU) of mobile payment systems are indicators of system quality, and these factors have an impact on users' intentions to use mobile payment systems. Following this observation, this study formulates Hypothesis 17 and Hypothesis 18 in the context of Google Pay.

Hypothesis 17: System quality significantly affects the behavioral intention to adopt Google Pay.

Hypothesis 18: System quality significantly affects satisfaction with adopting Google Pay.

Satisfaction represents a positive response after cumulative interaction with a mobile technology site (Zhou et al. 2013). It was noted that satisfaction enhances the willingness to adopt technology (Alzab et al. 2021). Similarly, Miao et al. (2017) mentioned that the use of health apps is related to user satisfaction. Thus, we hypothesize:

Hypothesis 19: Satisfaction impacts the user’s intention to adopt Google Pay.

Venkatesh et al. (2012) emphasized that a user’s behavioral desire to acquire a certain mobile technology results in the user adopting that mobile technology. Therefore, the following hypothesis was formulated in the context of Google Pay.

Hypothesis 20: Behavioral intention significantly affects the user adoption to adopt Google Pay.

4.4 Data and Methodology

This study has considered survey data from two different periods to accomplish the objective. One in 2018 with 365 respondents and the other in 2021 with 216 respondents. Table 4.1 depicts the sample profile of respondents.

Table 4.1 Sample characteristics

	Survey 2018 (in percentage)	Survey 2021 (in percentage)
<i>Gender</i>		
Male	49.3	59.7
Female	50.7	40.3
<i>Age group</i>		
< 20	0.4	1.9
21–30	29.3	53.2
31–40	52.9	30.6
41–50	15.9	12.5
> 50	1.5	1.9
<i>Education</i>		
Junior high school	0.8	0.9
High school	6.8	9.7
UG	46.6	44
PG	45.8	45.4
<i>Occupation</i>		
Student	7.9	37
Self-employed	7.1	11.6
Private employee	47.4	27.3
Government employee	8.2	11.1
Other	29.6	13

Source Authors’ compilation

The measures for the constructs were adopted following Venkatesh et al. (2012), Oliveira et al. (2016), Qasim and Abu-Shanab (2016), de Sena Abrahão et al. (2016), and Zhou et al. (2010, 2013). A detailed description of those constructs has been outlined in Annexure. Each question was evaluated using a five-point Likert scale, with the respondents' options ranging from (1) for "strongly disagree" to (5) for "strongly agree" (5). The questionnaire contained three sections. The first section provided an introduction to understanding user awareness of the use of mobile payment wallets. The second section focused on measuring the constructs, and the third section gathered the demographic information. To confirm the instrument's psychometric qualities, a pilot test was undertaken (Smyth et al. 2009). Upon receiving satisfactory results from the pilot test, the questionnaire was shared via Google Forms with the intended respondents to collect primary data. The first round of surveys was conducted in 2018 and resulted in 365 responses. The second round of the survey was conducted in 2021 and resulted in 216 responses.

The data collected were cleaned and analyzed using the partial least squared method-based structural equation modeling (PLS-SEM). PLS-SEM uses a variance-based technique to analyze correlations between variables, making it the methodology of choice (Hair et al. 2017, 2019). PLS-SEM has been used in studies with similar aims in a variety of fields, including marketing (Hair et al. 2012), organizational management (Sosik et al. 2009), and special issues (Shiau et al. 2019). In particular, PLS-SEM has also been used for model evaluation in earlier studies on mobile payments, such as that of de Sena Abrahão et al. (2016) PLS-SEM was selected as the method of analysis because, following the examples set by these studies, it is seemed like the most appropriate tool to use in achieving the goals of the current investigation. The model is assessed in two stages with this method.

The measurement model, which specifies how a construct is connected to its measurements, must be built as the initial stage. The link between the constructs specified by the structural model is then assessed (Hair et al. 2011). As for the PLS-SEM analysis, it was carried out with the help of the statistical program SMARTPLS 3.0.

4.5 Results and Discussions

The PLS-SEM model evaluates the measurement model by assessing internal consistency, convergent validity, and discriminant validity (Hair et al. 2017). Cronbach's alpha (CA) and the composite reliability (CR) measure the reliability of the overall test, while the average variance extracted (AVE) evaluates the test's convergent validity. For a model to pass the consistency and validity test, Nunnally and Bernstein (1994) and Churchill and Peter (1984) recommend using a CR and CA value of greater than 0.60 and a convergent validity value of greater than 0.5 (Hair et al. 2017). In this study, for all constructs, CR and CA values were obtained more than 0.6, and the AVE more than 0.5. Based on these findings, we are comfortable moving

forward with the model, as it is both internally consistent and convergent valid. The summarized output of the measurement model is presented in Table 4.2.

We used the Fornell–Larcker criterion to determine the reliability of the test’s ability to discriminate between groups. According to Fornell and Larcker, each latent variable’s AVE should be greater than the latent construct’s highest squared correlation with any other latent variable, and the value of the elements in the diagonal (representing the square root of AVE) should be greater than the values of non-diagonal elements (Fornell and Larcker 1981). Fornell–Larcker analysis showed that the model has satisfactory discriminant validity (see Table 4.3).

In the structural model, the R^2 value for the pre-covid survey and post-covid survey was found to be 0.79 and 0.60, respectively, indicating a satisfactory model fit (Hair et al. 2011). This also reflects that the proposed model is appropriate for predicting user adoption and is mediated by behavioral intention to use the payment wallet. A summary of the output from the structural model is presented in Table 4.4.

As per the results obtained in Table 4.4, the relationship $TTF \rightarrow UA$ was found to be significant in both pre- and post-covid duration. However, the following interesting differences were observed in the model.

$PE \rightarrow BI$; $EE \rightarrow BI$; $SI \rightarrow BI$; $HB \rightarrow BI$, and $HB \rightarrow UA$ were “not supported” in the pre-covid period, but they were “supported” in the post-covid period.

$PT \rightarrow BI$; $TR \rightarrow BI$; $SQ \rightarrow BI$, and $EE \rightarrow UA$ were “supported” in the pre-covid analysis, but they were “not supported” in the post-covid analysis.

Table 4.2 Measurement model

Constructs	Internal consistency		Convergent validity
	CA	CR	AVE
Behavioral intention (BI)	0.922	0.939	0.721
Effort expectancy (EE)	0.876	0.905	0.707
Facilitating conditions (FCs)	0.916	0.947	0.856
Habit (HB)	0.751	0.777	0.483
Hedonic motivation (HM)	0.771	0.866	0.685
Perceived cost (PC)	0.775	0.864	0.68
Performance expectancy (PE)	0.938	0.955	0.842
Perceived technology security (PT)	0.789	0.819	0.544
Satisfaction (SAT)	0.85	0.909	0.769
Social influence (SI)	0.788	0.862	0.681
System quality (SQ)	0.903	0.932	0.774
Trust (TR)	0.914	0.945	0.852
Task technology fit (TTF)	0.816	0.886	0.726
User adoption (UA)	0.835	0.892	0.676

Source Author’s computation

Table 4.3 Validity measurement

	BI	EE	FC	HB	HM	PC	PE	PT	SAT	SI	SQ	TR	TTF	UA
BI	0.849													
EE	0.554	0.841												
FC	0.822	0.631	0.925											
HB	0.601	0.383	0.562	0.695										
HM	0.793	0.464	0.786	0.635	0.828									
PC	0.471	0.198	0.385	0.312	0.466	0.825								
PE	0.233	0.663	0.273	0.311	0.25	0.006	0.917							
PT	0.641	0.295	0.607	0.759	0.593	0.361	0.167	0.737						
SAT	0.59	0.641	0.586	0.594	0.557	0.423	0.487	0.464	0.877					
SI	0.599	0.793	0.612	0.545	0.569	0.327	0.53	0.411	0.747	0.826				
SQ	0.645	0.503	0.576	0.489	0.659	0.465	0.429	0.34	0.705	0.549	0.88			
TR	0.387	0.378	0.45	0.69	0.44	0.14	0.452	0.71	0.466	0.375	0.315	0.923		
TTF	0.499	0.603	0.476	0.531	0.479	0.391	0.417	0.391	0.786	0.681	0.658	0.385	0.852	
UA	0.749	0.222	0.611	0.593	0.698	0.586	0.085	0.648	0.477	0.35	0.654	0.453	0.445	0.822

Source Authors' computation

Table 4.4 Pre and post-covid results

Hypotheses	Path	Wave 1 (2018)		Wave 2 (2021)		Wave 1 (2018)	Wave 2 (2021)
		Path coeff.	<i>p</i> value	Path coeff.	<i>p</i> value	Supported or not	Supported or not
H1	TTF → UA	0.237	0.005	0.332	0.000	Supported	Supported
H2	PE → UA	0.056	0.371	0.054	0.473	Not supported	Not supported
H3	PE → BI	- 0.076	0.250	0.128	0.06	Not supported	Supported
H4	EE → UA	- 0.374	0.002	- 0.027	0.776	Supported	Not supported
H5	EE → BI	0.176	0.151	0.186	0.037	Not supported	Supported
H6	SI → UA	- 0.140	0.284	0.049	0.596	Not supported	Not supported
H7	SI → BI	0.007	0.931	0.258	0.000	Not supported	Supported
H8	FC → UA	0.069	0.520	- 0.023	0.711	Not supported	Not supported
H9	FC → BI	0.320	0.007	0.233	0.002	Supported	Supported
H10	HM → UA	0.194	0.034	0.043	0.625	Supported	Not supported
H11	HM → BI	0.220	0.026	- 0.026	0.702	Supported	Not supported
H12	HB → UA	0.138	0.263	0.211	0.020	Not supported	Supported
H13	HB → BI	0.037	0.682	0.204	0.002	Not supported	Supported
H14	PT → BI	0.320	0.002	0.001	0.989	Supported	Not supported
H15	PC → BI	0.031	0.400	0.012	0.753	Not supported	Not supported
H16	TR → BI	- 0.192	0.024	0.05	0.532	Supported	Not supported
H17	SQ → BI	0.201	0.006	- 0.039	0.596	Supported	Not supported
H18	SQ → SAT	0.705	0.000	0.761	0.000	Supported	Supported
H19	SAT → BI	- 0.037	0.584	0.073	0.448	Not supported	Not supported
H20	BI → UA	0.616	0.000	0.25	0.043	Supported	Supported

Source Author's computation

The above results indicate that before covid-19, factors such as the performance of an app, the EU of an app, the habit of using an app, and friends' and peers' influence were not determining the user's intention to adopt an app for financial transactions. Rather, trust, confidentiality, and security of personal and financial information were significant concerns for users, and that determined the user's acceptance of an app for digital transactions. Since covid-19 necessitated contactless/cashless transactions, users inevitably relied on these apps for financial transactions, and therefore, the performance of the app, ease of use, the habit of using an app, and friend's and peer's influence became major determinants of a user's intention to adopt an app. In addition, inevitable reliance on these apps for financial transactions eradicated negative perceptions such as lack of trust, security, and confidentiality issues related to apps and established acceptance and positive attitudes among users making them more willing to use these apps for financial transaction post-covid.

The above observations clearly reflect that the behavioral intention of users during the pre-pandemic period has undergone a significant change during post-covid-19 pandemic. The TTF model states that whether a technology which gets adopted depends on how well it complements the task the user wants to complete and how much it improves their overall performance (Gebauer and Ginsburg 2009; Goodhue 1995; Goodhue and Thompson 1995). Our results add to show how the task features and the technical characteristics both have a significant impact on the Task Technology Fit, which in turn affects user adoption. This is in line with several studies conducted in the past (Junglas et al. 2008; Lee et al. 2007; Lin and Huang 2008). Therefore, banks should take into account the compatibility between user tasks and mobile banking features when advertising these services to potential customers. Those who are constantly on the road, as opposed to those who never leave the office, may find mobile banking to be more convenient. Those who fall into the former category can take advantage of mobile banking at any time and from any location. Users that fit within the latter category are more likely to continue with desktop and branch banking and are less likely to adopt mobile banking. That is why financial institutions need to segment markets and study consumer preferences. That way, they can provide users with a unique experience and acquire a technology that is well-suited to their needs. Adoption and good usage habits among users can be encouraged.

4.6 Conclusion

In conclusion, this study suggests that covid-19 scenarios and the inevitability of cashless transactions have changed the way users look at financial apps. Contactless transactions and the new normal in the business world have proved beneficial for Fintech apps. Factors such as trust, confidentiality, and security of personal and financial information, which were a major concern and determined the user's acceptance of an app for digital transactions, are no longer a matter of concern post-covid. Similarly, factors such as the performance of an app, ease of use, habit, friends, and

peer influence, which were not primary determinants of a user’s intention to adopt an app, have become important in deciding a user’s inclination to adopt an app because there is an inevitable reliance on these apps for financial transactions during covid and after the covid period. Keeping these observations in view, banks and other financial institutions and FinTech companies should focus on how to develop user-friendliness, EU, and a comprehensive customer base to promote digital banking services through apps.

Annexure: Measurement Scale and Items

Construct	Measurement	Source
Performance expectancy (PE)	PE1: Google Pay is useful to carry out my tasks	Venkatesh et al. (2012)
	PE2: I think using Google Pay would enable me to conduct tasks more quickly	
	PE3: I think using Google Pay would increase my productivity	
	PE4: I think using Google Pay would improve my performance	
Effort expectancy (EE)	EE1: My interaction with Google Pay would be clear and understandable	Venkatesh et al. (2012)
	EE2: It would be easy for me to become skilful at using Google Pay	
	EE3: I would find Google Pay easy to use	
	EE4: I think that learning to operate Google Pay would be easy for me	
Social influence (SI)	SI1: People who influence my behavior think that I should use Google Pay	Venkatesh et al. (2012)
	SI2: People who are important to me think that I should use Google Pay	
	SI3: People whose opinions that I value prefer that I use Google Pay	

(continued)

(continued)

Construct	Measurement	Source
Behavioral intention (BI)	BI1: I intend to use Google Pay in the next months	Venkatesh et al. (2012)
	BI2: I predict I would use Google Pay in the next months	
	BI3: I plan to use Google Pay in the next months	
	BI4: I will try to use Google Pay in my daily life	
	BI5: Interacting with my financial account over Google Pay is something what I would do	
	BI6: I would not hesitate to provide personal information to Google Pay	
Facilitating conditions (FCs)	FC1: I have the resources necessary to use Google Pay	Venkatesh et al. (2012)
	FC2: I have the knowledge necessary to use Google Pay	
	FC3: Google Pay is compatible with other systems I use	
Hedonic motivation (HM)	HM1: Using Google Pay is fun	Venkatesh et al. (2012)
	HM2: Using Google Pay is enjoyable	
	HM3: Using Google Pay is very entertaining	
Habit (HB)	HB1: The use of Google Pay has become a habit for me	Venkatesh et al. (2012)
	HB2: I am addicted to using Google Pay	
	HB3: I must use Google Pay	
	HB4: Using Google Pay has become natural to me	
Perceived technology security (PT)	PT1: I would feel secure sending sensitive information across Google Pay	Oliveira et al. (2016)
	PT2: Google Pay is a secure means through which to send sensitive information	

(continued)

(continued)

Construct	Measurement	Source
	PT3: I would feel totally safe providing sensitive information about myself over Google Pay	
	PT4: Overall Google Pay is a safe place to send sensitive information	
Trust (TR)	TR1: Google Pay is trustworthy	Qasim and Abu-Shanab (2016)
	TR2: I get an immediate confirmation message in Google Pay	
	TR3: I trust Google Pay to be reliable	
User adoption (UA)	UA1: I often use Google Pay to transfer money	Zhou et al. (2010)
	UA2: I often use Google Pay to book train tickets	
	UA3: I often use Google Pay to do mobile recharge	
	UA4: I often use Google Pay to earn scratch cards and get offers	
Perceived cost (PC)	PC1: I would have financial barriers in order to use Google Pay	de Sena Abrahão et al. (2016)
	PC2: I believe I would have to do a lot of effort to obtain the information that would make me feel comfortable in adopting Google Pay	
	PC3: It takes time to go through the process of using Google Pay	
System quality (SQ)	SQ1: Google Pay helps me to quickly make the payments	Zhou et al. (2013)
	SQ2: Google Pay is easy to use	
	SQ3: Google Pay is easy to follow and understand	
	SQ4: Google Pay is attractive to the users	
Satisfaction (SAT)	SAT1: I feel satisfied with using Google Pay	Zhou et al. (2013)

(continued)

(continued)

Construct	Measurement	Source
	SAT2: I feel contented with using Google Pay	
	SAT3: I feel pleased with using Google Pay	
Task technology fit (TTF)	TTF1: In helping complete my payment tasks, Google Pay is enough	Zhou et al. (2010)
	TTF2: In helping complete my payment tasks, Google Pay is appropriate	
	TTF3: In general, Google Pay fully meets my payment needs	

Source Authors' compilation

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Chapter 5

Are We Ready for Robot Maids in the Hotel Industry? A Qualitative Study of Potential Tourist Reviews with Big Data Analytics



Furkan Baltaci  and Aditi Dang 

5.1 Introduction

Digital transformation is an inevitable process that continues in all areas of life. Reaching more people (Chang and Chen 2021); abolish borders between countries, people and companies (Salter 2006); factors such as achieving the goal of a cleaner environment (Chege and Wang 2020), providing cost advantages (Karia 2018) and gaining competitive advantage (Porter 1985; Powell and Dent-Micallef 1997) push systems to digitalization. The use of technology is not a new phenomenon for humanity (Resi et al. 2018). Technological investments that started after the industrial revolution have continued exponentially in the current century (Liao et al. 2018). What has changed in our age is the speed of technological advances and the expansion of usage areas (Wang and Love 2012). Rapid change and transformation paved the way for technology to take place in all areas of life (Morrar et al. 2017). In fact, technology has started to be offered to people as a personalized service (Chan 2017).

The use of technology is now a necessity rather than a luxury for both people and businesses. People turned to technology in order to be able to do their transactions faster and businesses to find solutions in times of crisis. The recent pandemic crisis is the most recent example of this. The pandemic process caught all industries off guard, and its impact was global. The COVID-19 pandemic was the exact equivalent of the black swan theory (Antipova 2020; Baltaci and Kurar 2022). During the pandemic, people experienced fear of being infected and dying and they tried to abide by the

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new rules. The closure bans left businesses in a difficult situation (Baltaci 2022). The use of digital transformation and technology to overcome the crisis and stand up again provided resistance to businesses (Mangalaraj et al. 2021).

The revival of the travel and tourism sector, which has been most affected by the pandemic, is an important phenomenon today (Fontanari and Traskevich 2022). Increasing resilience in tourism is important for the sustainability of touristic businesses and destinations. In order to increase resilience, tourism activities should be rethought and plans should be made for the future (Tasnim et al. 2022). Digitalization in the tourism sector is considered as an important resistance mechanism. The use of robotic technology, especially in hotels, is frequently on the agenda (Kumar et al. 2021). However, studies to understand the robotic service experience of tourists are not yet at a sufficient level. Studies on robotic technology in tourism are still very new in the literature. Therefore, it is important to obtain in-depth information. This study focuses on the hotel industry, which is one of the important parts of tourism. The focus of the study is to determine how the technological changes in the hotel industry are perceived by potential tourists and to predict their future touristic purchasing behavior. Qualitative research approach was adopted in order to gain in-depth information about potential tourists' use of robotic technology in hotels and to support studies on technology and tourism. It is thought that the results obtained will fill an important gap and form a basis for further studies. In addition, the themes, sub-themes, and codes to be obtained in the study will guide quantitative research and help scale development.

5.2 Theoretical Background

5.2.1 *Tourism Sector and Technological Transformation*

The use of technology in tourism first started in transportation vehicles. More technological, faster, and more comfortable means of transportation have facilitated international travel (Wang et al. 2010). Then, technological innovations were made in distribution channels. While package tours were sold through travel agencies, they began to be marketed through online channels after the Web transformation (Djuraeva and Khurramov 2015).

The use of technology in tourism has gained momentum with innovation activities. With R&D, it started to settle completely in the service delivery process (Peters and Pikkemaat 2006). With Industry 4.0 and the Internet of things, robot maids are now on the agenda (Schimperma et al. 2020). The COVID-19 pandemic has catalyzed the spread of technology in many areas of tourism (Baltaci and Kurar 2022). It is assumed that in the future tourism will take place in an economy where robots, artificial intelligence, and automation technologies (RAIA) will replace human labor Chiang et al. (2022). Although the use of robots in the hotel industry is a very new phenomenon, it is thought that the COVID-19 pandemic has facilitated the acceptance

of consumers (Kim et al. 2021). However, more evidence is needed for this. Therefore, more empirical findings on robot–human interaction should be revealed.

5.2.2 Attitudes of Tourists Toward Robotic Technology

There is not much evidence yet for robot–human interaction in the tourism industry. Because the use of robots in hotels and other stakeholder industries of tourism is not very common. However, in some studies, it is possible to review the results for tourist attitudes rather than experience. Çakar and Aykol (2020) revealed that robotic services significantly improve the quality of service offered to passengers and positively affect the intention of passengers to revisit robotic hotels in the context of customer loyalty behaviors. Ivanov et al. (2018) determined that Iranian tourists prefer to receive hotel services from believers rather than robots. This attitude was significantly influenced by the lack of knowledge about robots.

Choi et al. (2021) analyzed reviews of robot hotels. They found that potential Japanese tourists care about emotional issues about robotic technology. The people of other countries, on the other hand, discussed more technical issues. This situation reveals that cultural differences affect the attitude toward robotic technology. Ivanov and Webster (2019) proved that the use of robotic technology in tourism is only approved for information provision, cleaning activities, reservation, and payment processing. The most important factor affecting the attitude toward the use of robots in the hospitality sector is the general attitude toward robot servants.

The findings reflect the attitude of potential tourists about robotic technology. The use of this technology in very few businesses yet reduces the possibility of seeing the results of experiential studies. However, when the results of the cited sources are evaluated, it can be stated that people need more evidence and information about robotic technology.

5.2.3 Tourism, Authenticity and Robot Maids

Tourism is a service sector that contains the magic of authenticity. However, tourism progresses based on the experience economy (Rickly and McCabe 2017). Tourists agree to travel to get the new experiences promised to them. Many values such as the historical texture, natural environment, cultural heritage, social structure, and architecture of the destination are among the important experience elements. The historical, cultural, and natural environment of a destination can all contribute to the overall experience of a place, and these elements are often considered when evaluating the authenticity of a destination. Historical texture refers to the historical or cultural context of a place, including the events, people, and customs that have shaped it over time. This can include the architecture, monuments, and other physical features that reflect the history of the place (Waitt 2000).

The natural environment of a destination, including its landscapes, ecosystems, and natural resources, can also be an important part of the experience. This can include the flora and fauna, climate, and topography of the area (Li and Li 2022). Cultural heritage refers to the traditions, customs, and practices of the people who live in or come from a particular place. This can include the language, music, art, and other cultural practices that are unique to the region (Zhang et al. 2018). Social structure refers to the way that people in a particular place interact with each other and with their environment. This can include the relationships between different groups of people, as well as the roles and responsibilities that are assigned to different members of the community (Pizam et al. 2000). Architecture is another important element of a destination's experience, as it reflects the history, culture, and values of the people who designed and built it. The style, materials, and design of a building or space can all contribute to the overall feel and character of a place (Scerri et al. 2019).

It is possible to transfer all these experience resources to virtual platforms. This alternative route could be an important product for the tourism market. However, whether virtual and augmented reality will really be in demand by tourists is a question that has not yet been fully answered. Mura et al. (2017) proved that virtual tourism is not perceived as completely unrealistic, but that tourists' physical and sensory involvement is considered important to experience authenticity in tourism environments. Godovykh et al. (2022) stated that the pandemic has increased the desire to review virtual tours. In the study, it was revealed that virtual experience is affected by factors related to knowledge, quality, technology acceptance, and emotional involvement and has significant effects on tourists' attitudes and behavioral intentions. According to Guttentag (2010), planning and management, marketing, entertainment, education, accessibility, and heritage preservation are six tourism areas where virtual reality may be particularly valuable. However, the acceptance of such substitutes will be determined by a tourist's attitudes and motivations and constraints toward authenticity.

Gao et al. (2022) reconsidered the virtual tourism experience with a postmodernist approach. As a result of the study, three types of virtual experiences were revealed, such as: objective authenticity, existential authenticity, and postmodern authenticity. In the study, it was found that tourists who experienced VR describe the places they experience as real, but describe it as incomplete. In this sense, VR technologies continue to be developed. However, it should be noted that eliminating the shortcomings does not guarantee that it will be in increasing demand by tourists.

5.2.4 Technological Readiness, Tourism, and Robot Maids

We use technology in many areas in our daily life. Televisions, clocks, telephones, computers, kettles, toasters, transportation vehicles are some of them. The common point of these tools and materials is that people dominate them and communication is one-way (human-to-machine). Over time, the structure of communication has

changed, and communication between objects and people has begun. This technology is currently actively used in many areas. For example, when you give a command to your mobile phone, it detects it, performs the action, and provides feedback by voice. The object of communication here is the mobile phone, which is still used in daily life. Its object and purpose of use are accepted and taken for granted by everyone. However, robot maids stay out of this scope and begin to take place in human life as a new product and experience. What arises here is the dilemma of whether people are ready for such technology.

Currently, technology is not yet in a dominant position in the tourism sector. It is used as a complement to tourism services and facilitating transactions. Pradhan et al. (2018) revealed that the technologies used during travel facilitate the transactions of tourists, but the experiences of tourists who do not have technological readiness are negatively affected. Considering that technological developments are only recently integrated into the sector, it can be considered normal to experience such negativities as in the trial stages. Ma et al. (2022) revealed that robots serving in restaurants are educational and informative by customers, but robots serving in the service sector are not fun and do not affect the tourist experience. The study shows that people define robots as more educational and informative, but they are not yet in a state of awareness and readiness in terms of entertainment services. Finally, it suggested that the readiness level of people can be increased through entertaining educational scenarios, and a basis can be created for their use in service sectors such as tourism. According to the results of the study by Zhong et al. (2022), managers and financial officers focused on return on investment, while tourists focused on the benefits of room cleaning robots rather than the expense, managers and financial officers focused on return on investment. The most important factor motivating the negative attitude of hotel managers is the implementation costs and the thought that these costs cannot be compensated. From this point of view, readiness is necessary not only for tourists but also for all stakeholders of the sector.

5.3 Methodology

5.3.1 *Research Method and Sampling*

Although digital transformation has been spreading rapidly all over the world, many aspects are still in the dark. Whether people are ready to receive service from robots, the infrastructure suitability of enterprises, the opinions of the current workforce on robot employees, and the perspectives of students who are future employees have not been determined yet. However, the limits of technology use in the service sector have not been drawn, and ethical codes have not been revealed. In this study, the phenomenological approach, one of the qualitative research designs, was preferred. Thus, the phenomenon of using robot maids in hotel businesses was examined through big data.

Video comments uploaded to YouTube by social media influencers who visited the Henna Hotel in Japan were analyzed with MAXQDA 2020 Analytics Pro 20.2.2. At the beginning of the research, ten videos were selected by netnographic method. Almost all of the comments in four of them were positive. Nearly all of them were negative in three of them. Later, it was noticed that the background music in four videos was cheerful music and in three videos it was suspense music. To remove the manipulative effect of music on viewer comments, seven videos with music were excluded from my research. The qualitative research process was carried out on the comments of the remaining three videos without music.

The video comments analyzed in the study were obtained from the links below.

- <https://www.youtube.com/watch?v=kHMoEA0LcmI>.
- <https://www.youtube.com/watch?v=0YZxpzrANXM>.
- <https://www.youtube.com/watch?v=IMrGaOHJti4>.

5.3.2 Findings

Comments included in the study were categorized as priority. Thus, five themes were created. In the comments, 33 sub-themes/codes linked to five themes were obtained. The themes were named as emotional reaction, technological readiness, future projection, comparison.

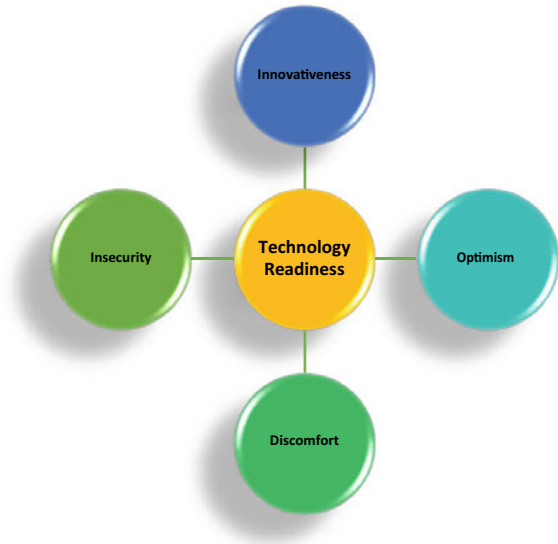
Emotional Response to Robot Hotels. The vast majority of potential tourists reacted emotionally to the robot hotel video. These reactions were classified as fear, anxiety, surprise, curiosity, and concern (Fig. 5.1).

Technological Readiness of Potential Tourists. The other theme that was most emphasized in potential tourist reviews was called readiness. Because the comments

Fig. 5.1 Emotional reaction theme



Fig. 5.2 Technological readiness theme



were centered around innovativeness, optimism, discomfort, and insecurity. Thus, the coding was done according to the technological readiness dimensions (Fig. 5.2).

Future Projection of Potential Tourists. Potential tourists' comments about the future were gathered around eight sub-themes/codes. Among these, the most repeated were unemployment, robot invasion, impeccable service, and crazy future codes (Fig. 5.3).

Human and Robot Comparison of Potential Tourists. The comments made often emphasized the differences between human and robot. Potential tourists think that there will only be virtual communication with robots, that it will never be a conscious activity, that robots in its current state are very boring and make you feel lonely, that robots will not be able to understand a human (Fig. 5.4).

Potential Tourists' Intention to Stay at a Robot Hotel. Nine sub-themes/codes were identified that could influence potential tourists' intention to stay at the robot hotel. Potential tourists stated that they would never be alone in the robot hotel because it was scary. They often stressed that the robots were irritating, triggering feelings of loneliness that the hotel was so quiet that it would be impossible to sleep there. However, some stated that humans are liars and unreliable, so robots seem more sincere and friendly. They evaluated that robot hotels attract them to get away from people and can be an escape point (Fig. 5.5).

Fig. 5.3 Future projection theme

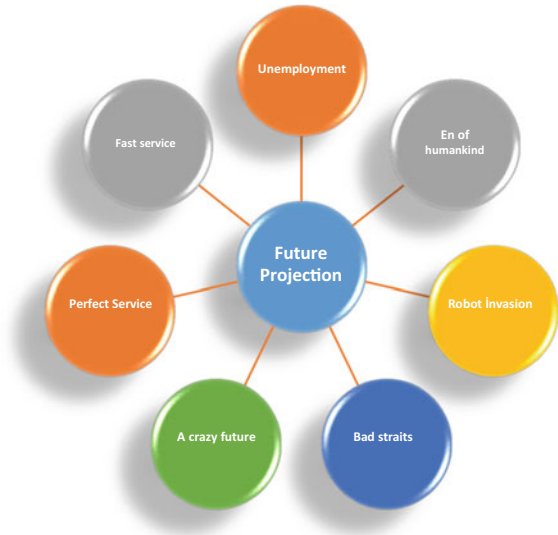


Fig. 5.4 Human versus robot theme

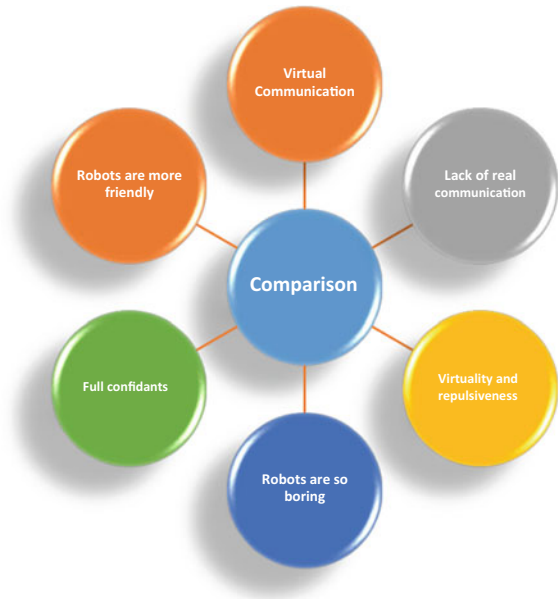


Fig. 5.5 Stay intention theme



5.4 Conclusion

In this study, potential tourists’ thoughts about robot servants in hotels were analyzed through video comments. Emotional responses of fear and anxiety in potential tourists. Hotel servants are things that have not yet been tried by humans and have many unknowns. According to the three reference point theory (TRP), it is a risky decision for humans to act against the unknown. The TRP explains that individuals, implicitly or explicitly, refer to their status quo (SQ), goals and aspirations (G), and minimum requirement (MR) when making a risky decision (Wong and Musa 2015). According to the TRP, potential tourists’ emotional fear, anxiety, and curiosity are due to the fact that they have not yet decided whether there is a need for robot hotels. In addition, it has not been fully evaluated by tourists whether they want this service and whether it is needed yet. The theme of readiness also supports this idea. Although innovation and optimism were emphasized in potential tourist reviews, discomfort and insecurity were more prevalent. The findings confirm that potential tourists are not fully prepared for robot hotels (Chang and Chen 2021).

In most of the comments, it was emphasized that robots replacing humans in the future will increase unemployment and livelihood in the hotel industry. In most of the comments, it was emphasized that robots replacing humans in the future will increase unemployment and livelihood in the hotel industry. This finding is also consistent with the study results of Choi et al. (2021). Others argued that robots are programmed to provide error-free service and that they can provide faster and more perfect service than humans. Chiang et al. (2022) stated that humans currently only focus on the service aspect of robots. Choi et al. (2021) also stated that potential tourists emphasized that robots should perform tasks such as payment systems, cleaning jobs, and

reservations rather than working like a human. Thus, the consistency of the codes created in this study was proven.

In the comparison of humans and robots, the most emphasized code was virtuality. It was thought that robots only do programmed work, use words learned by artificial intelligence, and that this could not go beyond a virtual communication. This came to the fore as a feature that made robot servants boring. In some comments, it was emphasized that robots are a complete confidant and that everything can be shared with them. This was coded as a feature that makes the robots look friendly.

Nine sub-themes/codes were identified that push and pull potential tourists to the thought of staying at the robot hotel. Humans are emotional creatures, and they definitely need real communication and servants who understand them. Robots were defined as machines that lacked the capacity and reality to do so and were seen as irritating. Robot hotels were disconnecting people from real life and communication. It condemned people to solitude and virtuality. So maybe business trips were ideal for forced stays. But they were not suitable for a holiday. Because the robots were not authentic. The essence of tourism, on the other hand, depended on authenticity (Hughes 1995). However, robots were an important alternative for those who were bored with humans and saw them as deceptive.

When the findings are evaluated in general, it has been clearly proven that people need more information about robot hotels. However, the necessity of fully integrating robots into the hotel industry should be discussed in detail. A decision must be made as to whether they will replace human power. In this case, new business lines should be created in tourism. Because it is possible for people to resist technological transformation for fear of unemployment and financial difficulties. In addition, there is authenticity in the nature of tourism. How to ensure authenticity in service delivery with robots is still a dark situation. Further studies should be conducted on the role of robots in a real touristic experience. The qualitative codes obtained in this study can be converted to a Likert-type scale. Thus, it is possible to conduct surveys to wider audiences and to generalize the results obtained.

Today, marketing channels are structured as B2B, B2C, C2C, C2P, P2P, and B2P. With the technological transformation, the Machine to People (M2P) era has begun, especially in the tourism sector. For this reason, it is necessary to understand the concept correctly, determine its scope, and make a SWOT analysis. In short, more in-depth information and evidence on this subject are needed. The findings obtained in this study are an important reference source and guide for future studies.

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Chapter 6

Analyzing the Responses of Firms to COVID-19 Pandemic Through Institutional Lens



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6.1 Introduction

Research on the effects and responses of the COVID-19 pandemic has developed into an interesting strand with focus on various aspects such as the well-being, resilience of both individuals and organizations, innovative practices, leveraging technology for the operations, digitization of business and managing and leading virtual teams—systematic inquiry into the responses of the firms during the pandemic still remains a relatively unexplored area. Many businesses and services which could be digitized took the giant leap, for instance, the education sector saw a huge demand for digital learning content ably served by Massive Open Online Course (MOOC) platforms, medical practitioners shifted to online consultations, and many of the organizational meetings were moved to virtual platforms (Mishra 2021). The pandemic was unique in the many challenges it imposed on the interconnected, ever-alive industry and society. The non-negotiable being government imposed lockdowns in the face of uncertainty of the mechanism of spread of the virus. Then came the mandated maintenance of social distance while traveling as well as work. In the face of changed industry functioning as compared to the plagues of early twentieth century, it would be safe to infer that many steps taken by governments and organizations were iterative and they did not have any so-called best practices to guide their responses. We position our research at the cusp of organizational responses to COVID-19 and the societal responsibilities of organizations. There are broadly three strands of research which have inquired into the role of organizations toward the society and the community, namely the Corporate Social Responsibility (CSR) Research (De Roeck and Delobbe

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2012) and the Diversity, Equity and Inclusion Research (DEI) (Abersson 2007) and the sustainability related practices (Bergman et al. 2017). Two common themes appear in these areas of research—first, the role of external forces in ensuring that organizations comply/take these areas seriously and make sincere efforts to contribute toward the concerns, and second, that organizations use their efforts in these areas as signals to communicate with the relevant stakeholders about their credibility, trust and brand perception (Celani and Singh 2011; Waller and Lanis 2009). Thus, the aspect of maintaining legitimacy of operations and signaling to their relevant stakeholders is of central concern especially when situations are socially relevant. COVID-19 pandemic undoubtedly is one such event and additionally novel as one hardly had any prior guidance to frame any response.

In this paper, we have attempted to cement our understanding of organizational response to the COVID-19 pandemic through the Institutional Theory (DiMaggio and Powell 1983). We have carried out a content analysis of annual reports of the 26 largest firms by market capitalization in the context of India. Through our content analysis, we concluded that normative isomorphic pressures presented a satisfactory explanation of the actions and responses of organizations against the COVID-19 pandemic over the coercive and mimetic isomorphic pressures. We suggest a slightly nuanced perspective of theorizing and tinkering framework as an avenue for future research.

6.2 Germane Literature

Organizations are embedded within the larger society and consequently are open to institutional influences (Scott 2003). Organizations as open systems are not only open to influences from the external environments, but they also strive for efficiency and legitimacy (De Roeck and Delobbe 2012; Scott 2003). Legitimacy can be achieved by organizations either by strict compliance to the law of the land, policies which are in alignment of societal norms and belief systems (Suchman 1995). Organizational actions are affected by both internal and external stakeholders. External stakeholders influencing organizational actions include regulatory bodies, governments, industrial associations and customers (Jawahar and McLaughlin 2001). In absence of explicit legislations or prior actions or situations, organizations tend to rely on institutional theory for their responses (Meyer and Rowan 1977). Environmental influences tend to create a homogenous set of responses from organizations which can be classified into mimetic, isomorphic or coercive forces (DiMaggio and Powell 1983). Uncertainty elicits a standard response from organizations which is a key characteristic of mimetic isomorphism, while adherence to law of the land or to the codes prescribed by the regulatory bodies is a characteristic of coercive isomorphism; increased professionalism or reliance on processes is a key characteristic of normative isomorphism (DiMaggio and Powell 1983; Meyer and Rowan 1977). Organizational response to the institutional forces falls on a continuum of total avoidance to full observance (Suchman 1995). Organizations have started explicitly declaring their responses to

the institutional forces through available channels such as the audited financial statements, social media and print media to ensure alignment with the norms and beliefs of stakeholders and maintain credibility and legitimacy (Wright and Rwabizambuga 2006).

Institutional perspective has been widely used to inquire into major organizational praxis such as influence on strategy, talent acquisition processes, compensation structures, operational efficiency and involvement with social activities and community development, engagement with special groups such as people with disabilities or other minorities (Beatty et al. 2019; Kulkarni and Rodriguez 2014; Matten and Moon 2008; Minton et al. 2017; Pagan-Castaño et al. 2022; Son et al. 2020; Stone and Colella 1996). Contemporary organizations carefully engage with all stakeholders and align their operations with the values of different stakeholders through various practices to maintain their legitimacy of operations and brand value among their customers, employees and in the society (Moore et al. 2017; Suchman 1995). The COVID-19 pandemic was a unique event in the twenty-first century owing to the global impact it had on various aspects of society and business (Bailey and Breslin 2021; Katz et al. 2020). Businesses undoubtedly have been impacted by this unique event for which ready-made solutions were largely unavailable with managers and leaders (Pinzaru et al. 2020). The pandemic however brought forth the agility and resilience of organizations to tackle the rapid and evolving change (Brosseau et al. 2019; Kantur and Iseri-Say 2012; Raetze et al. 2022). The broad dimensions of COVID-19 pandemic can be classified into the areas of operations, restructuring the organizations, accelerated pace of digitization and leverage contemporary technologies and explore new avenues/markets (Bai et al. 2021; Bailey and Breslin 2021; Katz et al. 2020). While majority of countries across the world resorted to confinement of people in the form of lockdowns, and social distancing became the buzzword and norm and businesses embedded within the larger society had to adhere to these norms, stakeholders in the form of investors, employees and customers started raising pertinent questions about the continuity and sustainability of the business models. To allay such fears, organizations proactively engaged with different stakeholders through periodic communications through multiple channels (Arvidson et al. 2012; Bailey and Breslin 2021; Lee and Li 2021; Zito et al. 2021). Prior research has found evidence that organizations enhance their credibility and trust by communicating important and socially relevant initiatives to the stakeholders through their audited financial statements (Bernardi et al. 2002; Gantaywati and Nugraheni 2014; Philippe 2006; Yuthas et al. 2002).

From an institutional perspective, organizations were expected to respond to protect their businesses, employees and also the larger community from the dreaded pandemic. We argue that the organizations' actions are most likely informed through the mimetic, coercive or normative isomorphic pressures (Frumkin and Galaskiewicz 2004). Coercive pressures on organizations are visible from the various diktats and regulations enforced by the various governments and the regulatory bodies (DiMaggio and Powell 1983). Mimetic pressures stem from the possibility that a praxis by the organization might have been termed as exemplary and as the 'best practice' and soon other organizations end up imitating it (DiMaggio and Powell

1983). Normative isomorphic pressures are likely to affect organization response when they end up innovating or modifying their processes to adapt to the new conditions (Meyer and Rowan 1977). It is also important to note that the actual response of the organization might be on the spectrum of bare minimum efforts and action versus active involvement to respond against the pandemic. Bare minimum action might be to replicate industry standards and donate to NGOs and other organizations, while active involvement would manifest in the form of innovations and possible best practices to carry out the business in the changed conditions. Organizational actions and responses would be taken up keeping their brand, credibility and legitimacy aspects (Cable and Turban 2003; Moore et al. 2017). Drawing parallels with the Diversity Research and CSR research, we further argue that the organizations are likely to use the audited financial statements as signals to the relevant stakeholders to improve their brand perception, maintain legitimacy and demonstrate their social awareness (Balasubramanian and Dash 2020; Kulkarni and Rodriguez 2014; Waller and Lanis 2009; Yuthas et al. 2002). Through this research, we propose to cement our understanding about the organizational response to an event of crisis where limited or no direction or information or best practices are available. We argue that this response would be subject to institutional pressures consequently we analyze these responses through the institutional perspective.

6.3 Analysis

6.3.1 Data

We relied on India's premium stock exchange the Standard and Poor's Bombay Stock Exchange (BSE) and took the top 30 listed firms based on their market capitalization (also referred to as BSE-30 firms) for the year 2021. The BSE is a premier stock exchange of India with an estimated market capitalization of about \$2.2 trillion, comparable to India's overall GDP. Hence, the S&P BSE-30 firms have large market capitalization, trading value and frequency. We relied on these firms primarily for three reasons, namely—because these firms seemingly do not have resource limitations, availability of reliable and timely data and thirdly there is a larger likelihood that they have set systems and processes within their firms (Balasubramanian and Dash 2020). We cross checked our list of firms with Business Today Ranking 2021 and Economic Times Ranking 2021 of most valuable firms owing to their robust ranking methods. We combined both these independent rankings and decided to include the firm into our consideration set if it was found in the top 100 rankings of either of these two prestigious rankings. Four firms which were in the BSE-30 list but were not in any of these rankings were removed from our final list of firms. Our final list of firms consisted of 26 firms. Out of these 26 firms three firms were public sector firms, while 23 firms belonged to the private sector. All the firms in our list had global operations and the age of the firm (2021 minus the year in which the firm

was established) ranged from 20 to 114 years. Our final list of firms consisted of 13 manufacturing and 13 service sector firms. To further know about the significant COVID-19 specific initiatives of these 26 firms, we relied on the audited annual reports of these firms (Point and Tyson 2006; Waller and Lanis 2009) hosted at their websites or hosted at the BSE website (<https://www.bseindia.com>). We relied on the audited annual reports as it acts as a signal not only to the investors about the health of the business, but it also acts as an important medium of communication for firms with the relevant stakeholders. As our research question is on a sensitive topic of structured response of firms during the pandemic. Consequently, a secondary source of information would be more reliable as it is relatively non-invasive rather than a primary source because of a possibility of social desirability or a response bias (Stone and Colella 1996; Zhang et al. 2019).

6.3.2 Method

We have carried out a content analysis of the audited annual reports of organizations with a specific focus on the COVID-19 pandemic—a once in a lifetime event with barely any best practice available. We examined how the top listed organizations in India responded and communicated with their stakeholders in the wake of the pandemic. We base our analysis of the organizations' annual reports for the year 2020–2021 on the methods outlined by Braun and Clarke (2006) and Gioia et al. (2013).

Both the authors independently studied the 26 annual reports and resorted to coding of the significant responses of the firms. Following Braun and Clarke (2006), the authors independently read the reports, making notes and proceeding with the initial codes across the 26 firm data. The initial codes were further collated into potential themes and sub-themes. For instance, initial codes such as 'change in medical policies,' 'new employee assistance program' and 'special leave' were collated into the sub-theme of 'support.' We then reviewed each theme in relation to the coded abstracts. In the process, inter-rater reliability was also checked with very few conflicts. The disagreements on initial codes were resolved by re-labeling of two abstracts and exclusion of an abstract.

6.4 Significant Findings

The relation between the codes and themes was translated into a thematic map presented in Fig. 6.1. Defining each theme in terms of its 'essence,' (Braun and Clarke 2006, p. 92) we collated the data extracts for each theme (ref. Appendix 1) to get a coherent narrative of what each theme captures. The next section describes each theme in detail.

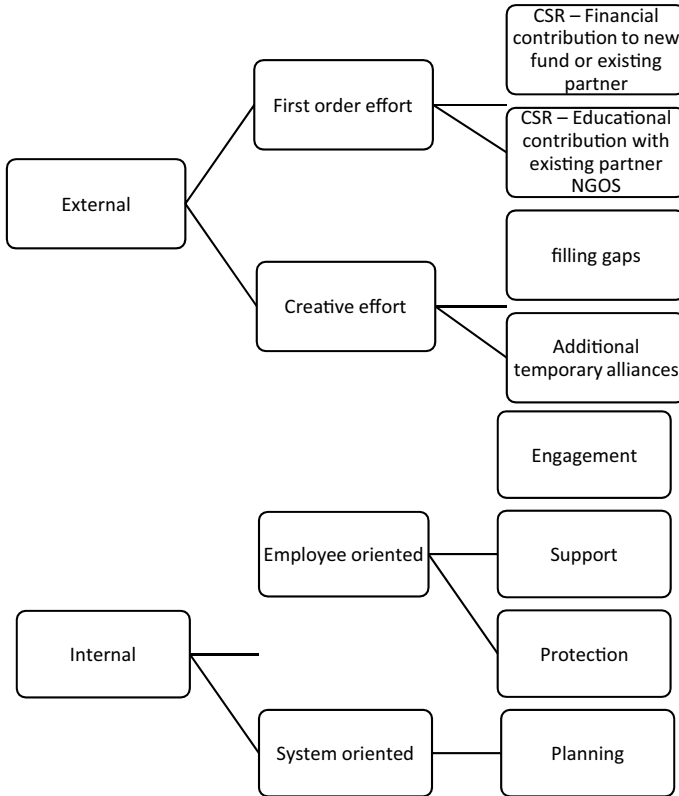


Fig. 6.1 Thematic map. *Source* Prepared by the authors

The analysis of data resulted in two major themes to understand the initiatives communicated by the companies—external and internal changes. These theoretical categories highlight the decision of intervention and communication by the organization in the face of adversities caused by the pandemic. Under internal initiatives, we describe interventions such as creation or modification of policies for financial, medical or educational support of employees, along with change in work expectations to align with risks of working in confined office spaces or adhering to COVID-19 protocols/lockdowns. The organization may also follow an externally focused approach, donating money outside the organization for causes helping institutions directly addressing issues caused by the pandemic or to NGOs supporting the impacted population.

We use the terms ‘engagement,’ ‘support’ and ‘protection’ to describe employee-focused organizational initiatives. To the extent that organizations engage with COVID-19 issues as a socially responsible practice, we have understood such behavior to be normative according to government guidelines and societal expectations.

6.4.1 External Changes

Under the theoretical category of external changes, we describe the sub-themes ‘first-order effort’ and ‘creative effort.’

‘First-order effort’ describes an increase in the level of effort through mechanisms such as partnerships or CSR initiatives that already existed in the firms. Most firms (14 out of 26) increased or budgeted for greater financial aid to existing partner NGOs. Similarly, financial aid was routed through existing CSR mechanisms toward purchase of equipment for hospitals. Another existing CSR mechanism that helped with efforts of mitigation impact of COVID-19 was educational aid to current institute partners. However, this was an existing mechanism used by four out of 26 firms in our sample.

TechMahindra¹: *‘Corporate citizenship, effective utilization of funds, designing new projects based on an objective assessment of needs at several locations are some of the integral aspects of the overall CSR agenda at TMF.’*

Airtel: *‘Standing with the nation in cognizance of our commitment to stand with the nation in one of the most difficult times mankind has faced, we collectively contributed to the PM CARES fund. We, along with Bharti Enterprises, and all its group companies and affiliates, made contributions to aid the government’s effort at mitigating the impact of COVID-19.’*

Interestingly, with the creation of a central fund by the government toward COVID-19 aid, while firms document an increase in their CSR budget due to the pandemic, only ten of twenty-six firms explicitly mention donation to this fund.

‘Creative effort’ describes initiatives that required either channels or new processes being developed, such as new partnerships to cater to the additional need of innovative and extensive medical aid. For instance, eight out of 26 firms in our sample started a new community program in collaboration with new local NGOs that were involved in distribution of cooked meals, first aid kits, etc., to affected areas.

Axis Bank: *‘The efforts of the Bank were ably buttressed by Axis Bank Foundation (ABF) which leveraged its network of NGO partners to reach out to the affected communities through a slew of measures ranging from providing basic food, hygiene supplies and ration kits, to creating awareness about the pandemic.’*

Another such effort involved using existing organizational assets to fill gaps in the demand for safety equipment for front line workers that the existing government and private companies could not fulfill. However, these changes were taken up by fewer firms (eight out of 26 firms).

Reliance: *‘Through the year, more than 1,00,000 masks and PPEs have been manufactured and supplied to health workers and caregivers per day.’*

¹ We have used original names of company extracts as the data is sourced from publicly available published annual reports.

6.4.2 Internal Changes

Two sub-themes comprise this theoretical category—employee oriented and systems oriented. Employee-oriented changes further include categories of Supportive, Engagement-oriented and Protective measures. The term ‘Support’ has been used to code efforts toward supporting the employee through a turbulent period by creation of mechanism for aid in travel, physical (17 out of 26) and mental health consultation (11 out of 26), financial aid (11 out of 26) to cover medical expenses and modifications in leave policies to reduce the impact of COVID-19 infection, extended to family members (10 out of 26). For instance, SBI reports *‘we undertook various initiatives for employee benefit such as reimbursement of expenses incurred on COVID-19 tests and treatment, special support to all the COVID-affected employees, and sanction of Special Leaves to employees on quarantine to contain the spread of the virus. These measures helped in keeping the employees motivated and equipped to handle the crisis.’*

The label ‘engagement’ was used to categorize employee-oriented initiatives that worked toward improving skilling (nine out of 26), onboarding (four out of 26) and communication from leadership and engagement drives (11 out of 26) in the new virtual mode of work for all firms.

Firms also took measures to reduce risk of infection and unemployment in employees. We categorize such initiatives under ‘Protection’ that was also extended to contractual staff and vendors. For example, SBI’s measures were catering to employees *‘The WFH arrangement provides flexibility to our employees to continue working from home thereby eliminating the risk of contracting infection during travel by public transport’* while TechMahindra reports extension of initiatives to vendors as well *‘Your Company also facilitated the screening of around 10,000 third-party vendors, associates and members of the partner ecosystem including those working in pantry, sanitation and security departments through the Mhealthy platform.’*

The sub-theme of ‘systems oriented changes’ describes changes made in order to update or strengthen existing systems in terms of risk mitigation and technology for virtual or hybrid work in the long term.

6.5 Discussion

Based on the findings we infer that both internal and external changes adopted by the organizations were in the direction of sustaining legitimacy in the eyes of their stakeholders (customers and investors—mainly) (Moore et al. 2017). Normative isomorphic forces seem to be at play in the responses adopted by the firms. To recapitulate—adherence to rules and regulations leads to coercive isomorphic force; adherence to expectations or societal norms leads to normative isomorphic pressures and imitating others leads to mimetic isomorphic pressures (DiMaggio and Powell 1983). Upon a careful analysis of the response categories, it can be inferred that

coercive isomorphic forces had relatively little role in the responses adopted by the firms. For instance, the government had brought out an explicit lock down measure and related advisories against termination of employees citing pandemic and most firms adhered to these rules. As our sample does not capture practices reported across years, we cannot conclusively analyze mimetic forces in measures adopted by the firms.

We posit that normative isomorphism can be seen in the major measures adopted by the listed firms. While internal changes may be arguably targeting employees as major stakeholders, we argue that internal changes curated to address a society-level impact of the pandemic also addressed expectations of society as a stakeholder. The internal actions are subdivided into those measures focused on protection of the employees, measures focused on enhancing the engagement of employees in the virtual medium and measures to enhance support for the employees. For instance, during the pandemic the government had issued an advisory to not victimize employees by terminating them citing operational concerns and to provide for the salaries of the employees—which was adhered to by most firms by providing the employees with special leave or in cases where some of the employees or their dependents were infected they were provided with special leaves. With the strict imposition of lockdown measures and adherence to social distancing norms, many firms transitioned to remote work/work from home type of arrangements (Katz et al. 2020). The firms assisted the employees through allowances for ergonomic furniture and providing work stations (Pinzaru et al. 2020). The protection mechanisms within the internally focused measures can be summarized as protection of employment, transition to work from home where possible or adopt hybrid working practices and provision of adequate facilities to transition into work from home environment (Mishra 2021). The support measures can be summarized as provision of additional insurance cover for the employees and their dependents, coordination with hospitals and authorities for medicines or hospitalization, provision of special leave to employees, in some cases assisting employees' return to India from foreign locations and launching programs with a focus on mental well-being of the employees. The engagement measures can be summarized as major focus on upskilling using the virtual media/platforms and regular communication from the top management and the business leaders. We propose that internal measures of 'support,' 'engagement' and 'protection' aligned with the expectations of employees' well-being extended to include family as well as community in the face of a global, potentially fatal adversity.

The external changes included measures using existing channels of CSR as well as innovative associations and initiatives toward larger benefit of the society. Existing CSR initiatives were pursued with an enhanced vigor which was increasing the allocated CSR budget, contributing to the PM Cares fund, collaborating with various governmental and non-governmental organizations to assist in provision of masks, sanitizers and other essentials. Some firms collaborated with research and development organizations. Many enterprising firms also adopted creative efforts and thereby exploited new business opportunities such as production of personal protection equipment (PPE kits) or related financial services.

6.6 Directions for Future Research and Conclusion

Our findings highlight the role of changing normative expectations gaining prominence under global adversities such as the pandemic that impact legitimacy-building reporting of initiatives by organizations. In the context of government measures, guidelines, critical shortage of medical resources and threat to business, firms first, may not have enough information around best practices and secondly may be obligated to reposition significant stakeholders from general profit argument to community-driven factors. We thus signify the impact of expectations of employees and society during the pandemic on organizational initiatives and communication, using institutional theory.

However, one of the major critiques of the approaches viewing them through the lens of isomorphism is that it seems that innovation has been stifled. The organizations during the pandemic had to attain the twin objective of legitimacy and maintaining the business continuity—which necessitated innovation and change management. While creative efforts such as new associations with medical and research institutes, or creation of new task forces across organizations can be analyzed as responses to normative forces; the first-order changes such as extending medical policy benefits to family members or increase in CSR budgets may not qualify as institutional changes. Future research on such initiatives may refer to work on ‘tinkering’ and ‘theorizing’ proposed by Mishra (2021). Both these measures are to simultaneously achieve social legitimacy and economic efficiency. Tinkering, referring to minor adjustments within the prescribed norms to achieve the business objectives (Knorr 1979; Weimer 1993) may be used to answer questions on limited organizational measures or may be better suited to analyze actions taken by smaller firms which also faced similar institutional forces. For instance, during the pandemic one of the major guidelines issued by the government was to practice social distancing and avoid or limit physical interaction. All organizations consequently transitioned to work from home type of arrangements where possible. For manufacturing types of environments, organizations adopted hybrid mode of operations and managed to operate with reduced strength. The move to work from home or work from anywhere was attempted by most service organizations. However, research on work norms during the pandemic highlight the difficulties in implementation due to hardened perceptions around ‘flexi’ in management. Analyses of changes in work structures and policies that helped organizations redefine their manner of work, while similar and thus still institutional, may be better answered using ‘Theorizing’ (Rao et al. 2003).

Appendix 1: Coding

Coded excerpt	First-order code	Second-order code	Theme	No. of companies
Medical policy level—change from previous policy	Support	Employee oriented	Internal	11
Special leave and compensation for to family of affected employee	Support		Internal	10
Additional initiative to bring employees abroad back to India	Support		Internal	2
New team to coordinate hospitalization, testing, consultation, etc	Support		Internal	17
New employee assistance program for mental well-being	Support		Internal	11
Additional measure to improve virtual work—onboarding	Engagement		Internal	4
Additional measure to improve virtual work—engagement seminars, communication from leaders, etc	Engagement		Internal	11
Innovative drive for online upskilling	Engagement		Internal	9
Increase/start of WFH	Protection		Internal	10
Hybrid approach in plants	Protection		Internal	2
New policies like remote workstation set-up, laptop rental, WFH allowance, special COVID-19 leave benefits, insurance cover for home quarantine	Protection		External	3
Protected employment, paid while closed	Protection		Internal/ Ext	4
Extended medical aid facilities and coordination measures to vendors/FARMERS	Protection		Internal	6
Scaled up IT systems	Planning	System oriented	Internal	5
New teams for risk mitigation	Planning		Internal	3
CSR—financial contribution through purchase for hospitals	First-order effort	CSR—financial contribution to new fund or existing partner	External	9
CSR—financial contribution to PM Cares	First-order effort		External	10
CSR—financial contribution to partner NGOs	First-order effort		External	14

(continued)

(continued)

Coded excerpt	First-order code	Second-order code	Theme	No. of companies
CSR—educational—partnership to provide online educational access	First-order effort		External	4
CSR—medical aid in distribution, funding of RnD in other institutes	New alliances, same channel	CSR—educational/ medical contribution with new partner NGOS	External	10
Other—distribution of cooked meals, etc., across cites	Creative effort	Additional temporary alliances	External	8
Other—non financial community building initiatives	Creative effort		External	5
Other—used manufacturing facility to make masks, etc., for hospitals and police force, etc	Creative effort	Filling institutional gaps	External	2
Other—new product of COVID benefit to existing premium card holders	Creative effort		Internal	1
Other—started collaborative healthcare program	Creative effort		External	8
Other—trained youth to help medical and relief organizations	Creative effort		External	2

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Part II
Case Studies on Conference Theme

Chapter 7

'To Be or Not to Be, That is the Question': Analysing VIL's Competitive Prospects in the Telecom Sector



Prerona Baruah and Sneha L. Thayyil

In early January 2022, Himanshu Kapania, Chairperson, Board of Directors, Vodafone Idea Limited (henceforth, VIL), was in his Mumbai office contemplating the future of the company's finances. In the last five years, VIL has continuously been reporting losses, even though its sales had started to stabilize and improve from mid-2018 (Exhibit 1). After Reliance Jio Infocomm Limited (henceforth, Jio) launched its services in 2016, tariffs reached rock bottom. All major players in the sector saw a fall in their Average Revenue Per User/Unit (ARPU)¹ and some operators were even forced out of the market (Venkat 2021). Although VIL has been fighting the competition, it is in bad financial shape. The company's current liquidity crunch is due to its losses as well as long outstanding dues to the state as well as the tower companies.

In September 2021, the government had announced a moratorium of four years on the dues that the telecom operators owed to the government. For VIL, accepting this would result in liquidity of ~ INR 589 billion over a period of 4 years, or ~ INR147 billion annually (Exhibit 2). As Kapania reviewed the data that the Board had to deliberate over to decide whether to accept the moratorium, he was concerned about VIL's long-term viability, as well as the ownership implications of the offer.

¹ The ARPU is a quick measure of the average revenue realization per subscriber, and it is helpful in monitoring sources of revenue and growth.

The intent of this teaching case is to serve as a basis for class discussion, and it does not aim to comment on either correct or incorrect handling of administrative problems.

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How should the company recover its profitability, and how might it exist in future? Given that the launch of 5G technology is going to change the game altogether again, *should the Board of Directors at VIL accept the moratorium, or liquidate?*

7.1 Industry Analysis: India's Telecom Space

Teledensity in the Indian telecommunications sector has evolved rapidly from the reforms of 1991, beginning from as low as six devices per 1000 people to over a billion connections as of April 2022 (Povaiiah 2022). India's subscriber base has grown to over a billion users in 2022, making it the second-largest market for telecommunication services (Sun 2022a). Telecommunications infrastructure, particularly Internet access, is a lifeline of most modern economies—India being no exception. Further, studies have found that mobile penetration in itself has a direct effect on economic output (Vodafone Group 2009; Kathuria et al. 2018). By the same token, any disruptions in the telecommunications sector can have wide-ranging negative spill overs. Even in the pre-pandemic world, disruptions like Internet blackouts resulted in estimated economic costs running into billions of dollars in a single year (West 2016; Kathuria et al. 2018). In the post-pandemic world, hitherto non-digitized sectors/services have also gone virtual. Digitization accelerated throughout many economies and industrial sectors both, as a reaction to the pandemic, and as an attempt to mitigate its effects (Ashton-Hart 2020). Thus, given the strong dependence of our economic health on the telecom sector, its competitiveness is of utmost importance. Consolidation of market power may result in market failure and bring about its associated economic inefficiencies.

Following the New Telecom Policy (NTP) of 1999 that enabled larger competition and participation of the private sector, there have been two major wars in the Indian telecommunications space—triggered by the then-new entrant Tata Docomo in 2007, and later Jio in 2016 (PTI 2015; Business Insider India 2019). When Jio entered India's \$50-billion (~ INR 3.35 lakh crore²) telecom industry in September 2016, it delivered on its promise of offering the lowest data prices in the world. At that time, a huge source of annual revenue for telecom companies was from voice call charges. Jio changed the game by removing such charges (Balachandran 2016). Soon after its entry, there were clashes with incumbent players—Jio issued statements alleging high call drop rates when calls were made from its network to other operators, owing to incumbent operators releasing lesser-than-agreed points of interconnections (PoIs)³ and denial of mobile number portability (MNP) requests. Incumbent players, in turn, argued that Jio followed predatory pricing. They lodged complaints with the Telecom Regulatory Authority of India (TRAI) and alleging that Jio was providing

² Converted at an exchange rate of \$1 = INR 67, which was the average exchange rate for 2016.

³ I.e. Jio alleged that while an Airtel subscriber's call to a Jio user would go through, the reverse would not take place.

'full services' in the name of trials—i.e. before the services technically began (Karnik and Balachandran 2016; Guha and Mankotia 2016; PTI 2016).

A much-debated policy change that coincided with this period was the slashing of mobile termination charges (MTC)⁴ by 57% by TRAI from October 2017 in the interest of consumer benefits and incentivizing deployment of new technology by telcos. Bharti Airtel (henceforth, Airtel)'s account books went deep red immediately post-2016, but Vodafone financials seemed to be able to withhold the initial shock. However, over time, as the strategic decisions played out in each company, the former is now seen on a path of apparent recovery (though slow and painful), while the latter is struggling with compounding losses and piling dues.

From 2016 onwards, the telecom market is seeing increasing consolidation of market share by the top five providers. Soon after its entry, Jio firmly established itself as the top broadband provider across all three segments—wired, mobile devices as well as fixed wireless. Over the years there has been further consolidation down to three main players—Jio, Airtel and VIL (Exhibit 3). Jio's 'aggressive' entry into the Indian telecommunication sector began to rapidly eat into the customer base and, hence, revenues of all existing players. While Airtel, Vodafone and Idea Cellular (from September 2018 onwards, VIL) remained in the top five service providers over the entire period examined—Airtel's targeted-defence strategies helped it survive over the long term, while VIL's 'aggressive defence' could not save it from continuously losing ground (Exhibit 4).

7.1.1 A Key Competitor's Journey—Bharti Airtel Ltd.

Airtel offers interesting though partially contrasting insights in peer comparison with VIL. Both companies have ranked among the top five telecom providers, and both were the major incumbents hit but surviving (thus far) post Jio's entry. Bharti Tele-Ventures was first formed as a fully owned subsidiary of Bharti Telecom Limited in 1995.⁵ The company began its telecom services business from Delhi by launching cellular services under the 'Airtel' brand. In 2002, it came out with an issue of INR 18.53 crore equity shares⁶ and raised INR 834 crore (Moneycontrol n.d.; Bharti 2002). The parent company itself has now expanded into a business group. 'Bharti Airtel', which remains as the group's flagship company, presently operates across 17

⁴ MTC affect the tariff rate, as they are payable by the operator whose subscriber makes a call to the operator whose subscriber receives the call. The announcement of MTC rate reduction was strongly opposed by the Chairmen of both Bharti Enterprises (Sunil Mittal) and Vodafone (Vittorio Colao) who wrote separate letters to the government and TRAI arguing that even the prevailing rate of MTC way below cost and any reduction will 'destabilize the sector'.

⁵ The certificate for commencement of business was received by Bharti Tele-Ventures on 18 January 1996.

⁶ The company took the book building route with a floor price of INR 45/- per share.

countries panning Asia and Africa and has made it to list of top three global wireless operators (Bharti n.d.).⁷

Airtel was already a top three player in the Indian market when Jio entered in 2016, with a global subscriber base of over 350 million (Balachandran 2016; Sun 2022a, 2022b). After the skirmishes that followed its entry, Jio and Airtel followed separate strategies to maintain and boost their ARPU. Jio continued to focus on volume, via increasing low-paying customers through heavy JioPhone subscriber addition and the launch of subsequent JioPhone plans, later diversifying its customer mix through its Digital Services Platform (Sharma 2021a). This enabled it to generate a steady rise in its user base in India and globally, which stood at 471.36 million in FY 2021 (Sun 2022a).

Airtel, on the other hand, stated clearly under ‘How We Will Win’ in its Annual Report, 2016–2017 that it planned to generate more high revenue (ARPU) customers by (a) grabbing an increased share of 4G devices, (b) driving up post-paid connections, (c) promoting SIM consolidation and (d) promoting higher data consumption (Bharti Airtel Limited 2017). This has enabled it to retain the highest industry ARPU (Kaur 2022), but at the expense of decisions that shut out ‘ultra-low-spending customers’, i.e. customers who buy recharge plans priced lower than INR 35 a month (Communications Today 2018). This floor was increased to INR 79 in 2021, along with the introduction of the Airtel Black post-paid plans and an increase of INR 100 on the corporate post-paid plans front in favour of pushing up the ARPU from INR 200 to INR 300 (Bharti Airtel 2021; Sharma 2021b) (detailed trends on in customer targeting and coverage are covered in Exhibits 5–6).

Airtel’s governance has also possibly enabled the company to deliberate over its competitive strategies more cohesively. It continues to essentially remain a closely owned and managed company as the promoters not only have a majority shareholding and occupy seats on the Board, some key managerial positions are also held by the promoter group (Raithatha and Shaw 2019). Bharti Telecom Limited remains the largest shareholder in Bharti Airtel, with a stake of 35% (Bharti Airtel Limited 2022a, 2022b). Sunil Bharti Mittal was the Chairman and Managing Director until F.Y. 2012–2013, after which he has remained the Chairman till date, and Gopal Vittal was appointed as the CEO (Bharti Telecom Limited). One or more of his brothers—Rajan Bharti Mittal and Rakesh Bharti Mittal—also continue to occupy positions on the Board. Details of equity ownership and the Board composition are included in Exhibits 7–9.

⁷ Moving into the second half of 2022, the company had close to five hundred million subscribers globally (around million from India).

7.2 Vodafone Idea Ltd.—Past Strategies, Resources, Capabilities and Challenges

Vodafone Idea Limited, in their current form, is a partnership between the Aditya Birla Group and the Vodafone Group that resulted from a horizontal merger⁸ between two of the largest telecom players—Vodafone India Ltd. and Idea Cellular Ltd.^{9,10} The joint venture entailed that the new ownership structure had Vodafone Group holding 45.2% shares and the Aditya Birla Group held 26%¹¹ (further details are provided in Exhibit 11). While the Board had equal representation from both entities, the Chairman was appointed by the Aditya Birla Group, and the Chief Financial Officer was pointed by Vodafone group.

The merger emerged as a strategic response to Jio and resulted in VIL's customer and revenue market share becoming 35 and 40%, respectively. The merged entity also ended up with the largest spectrum portfolio and has chosen to compete on multiple fronts. VIL entered the price war by introducing 'Unlimited Plans' and 'Super Plans' continuing with Idea Cellular Ltd.'s style of promotions using targeted social campaigns along their 'Digital India' vision. Apart from tweaking tariff plans, it has been expanding its rural penetration in an attempt to tap into India's large 2G market potential. By September 2021, the share of rural subscribers in VIL's total subscriber base had reached 50.72%, which is the highest among all telecom service providers (TRAI, January 10 2022). They also entered into multiple strategic partnerships with domestic handset makers (Intex Technologies, LAVA and Micromax). Unlike Bharti Airtel Ltd., VIL has been changing its 'focused investment' points. For instance, investor presentations from 2018 and 2019 strategize on shifting focus from 'circles' to districts by identifying key revenue generating districts, which are to be 'fortified and won' (VIL 2018, 2019). Again, by 2022, the strategy shifted back to making 'focused investments' in 17 priority circles, which constitute 98% of the company's revenue (VIL 2022).

⁸ The merger ratio was 1:1 and promoters of both entities retained equal rights on matters of importance. Both, for instance, retained joint control over appointments of the Chief Operating Officer (COO) and Chief Executive Officer (CEO).

⁹ The approval from the Department of Telecommunications (DoT), Government of India, was received for the partnership 2018 (July).

¹⁰ The former had first been incorporated in 1995, as Birla Communications Ltd., and went on to be Idea Cellular Limited. The company name has changed multiple times owing to mergers and joint ventures—with Grasim Industries, AT&T Corporation and Tata Group. From 2006, the company finally became a subsidiary of the Aditya Birla Group with the exit of the other groups in the joint venture. The latter (Vodafone India Limited) traces its lineage to Hutchison Max Telecom Ltd. (HMTL), set up in 1992 via a JV (joint venture) between Hutchison Whampoa and the Max Group, was acquired by the Vodafone Group (a British multinational company) in 2007.

¹¹ Based on the terms of the merger agreement, shareholding equalization was provided for the Aditya Birla Group had the right to acquire up to 9.5% additional shareholding from Vodafone Group. Until this shareholding equalization took place, voting on excess stake held by Vodafone was to be restricted and exercised jointly. Further, Vodafone Group had the right to sell excess stakes if equalization is not achieved.

VIL's challenges, however, have also been multi-pronged. To begin with, its financial standing is precarious with liabilities surging every year. The Quarterly Reports show that it is not only operating at thin margins (Exhibit 11), but is plagued by massive tax bills and mounting debt. As of June 2022, the company's total gross debt stood at nearly INR 2 lakh crores. To the Government of India, it owes over INR 1,80,000 crore as deferred spectrum and AGR¹² dues. Its debt from banks and financial institutions stands at over INR 15,000 crores. In addition, it owes over INR 9000 crores in dues to the Indus Towers and the American Tower Corporation (ATC) for availing their services. All this led the company's independent directors to raise concerns. Since 2018–2019, the company resorted to rampant cost-cutting measures, which include laying-off thousands of employees (Khan and Sengupta 2020). This comes at a time when the attrition rate itself is high in India's telecom sector (Malvania 2022). For VIL, even as the merger was proposed, there was large-scale employee attrition at all levels with the uncertainty about job security in the merged firm (Buddhapriya 2018; Disruptive Asia 2020).¹³ Finally coming to its customers, despite multi-pronged strategies, the company is losing out on its customer base rapidly with rising service dissatisfaction. The liquidity crunch meant that not much had been spent on network until recently—while VIL started out as cash-rich when Jio entered, it is now the most constrained among the three major players (Exhibits 12–13). In 2021 alone, TRAI received over 14 thousand service-related complaints against VIL. As per data release by TRAI in January 2022, VIL's share of customer market has fallen to just 22% by September 2021 (TRAI, January 10 2022).

As regards governance and decision-making within the company—the equity share of Indian promoters has been declining and by 2022 it stands at 16%. This was preceded by Kumar Mangalam Birla's resignation as the non-executive chairman of VIL in 2021. At the same time, non-promoter's share in equity ownership has also been falling and it now stands 25% (June 2022). At present, over 58% of the equity is held by foreign promoters of the company. If the company opts for the moratorium, CLSA (a renowned brokerage and investment group) has warned that after FY26, the government's share in VI may rise to as high as 88% if the company fails to make the annual payments (about INR 335 billion) and the government decides to convert its debt into equity (Aulakh 2022a, b). Details of equity ownership, Board of Directors composition and major financials are included in Exhibits 14–18 for financial years beginning from 2010 to 2011.

¹² AGR or Adjusted Gross Revenue refers to spectrum usage charges and licensing fee charged by the Department of Telecommunications (DoT).

¹³ Employees anticipated rationalization lay-offs after the merger and, therefore, many chose to bail themselves out early (Raj 2017; Economic Times 2017).

7.3 Looking Ahead: 5G—The Game is Afoot!

'Telecom is a gateway of Digital India. Telecom is the root of all digital services that we are seeing in our modern life. 5G services will bring fundamental change in several sectors—education, health, agriculture, logistics, and banking' ~ Ashwini Vaishnav, Minister of Communications (India).

'It (5G services) is a generational leap that can help increase the telecom sector's contribution to GDP to 8–9 per cent from 6.5 per cent presently' ~ Arun Chawla, FICCI¹⁴ Director General.¹⁵

With the launch of fifth-generation (5G) cellular technology, all digital experiences are expected to significantly improve. The new technology is over twenty times faster than the existing (4G) technology and also has lower latency¹⁶ (Keshri 2022). The initial rollout is likely to be in major cities (Delhi, Mumbai, Chennai, Pune and Bengaluru), and over time, it is expected to be a major source of growth for the telecom industry. The government would likely have the spectrum auction later in 2022, and Mr. Himanshu Kapania would need to think over this potential investment long and hard before he can lead the deliberations regarding VIL's future in his upcoming Board meeting.

What are the odds of profitability if VIL decides to stay on in India's Telecom market? If it decides to stay, how should it raise funds to address the present liquidity crunch? Even if VIL decides to stay, will it be feasible for the company, in its current state, to risk investing in 5G infrastructure at all?

The most immediate question, however, is whether the Board should accept the moratorium and stay on to compete. *Vincit Qui Se Vincit.*¹⁷

¹⁴ Federation of Indian Chambers of Commerce & Industry.

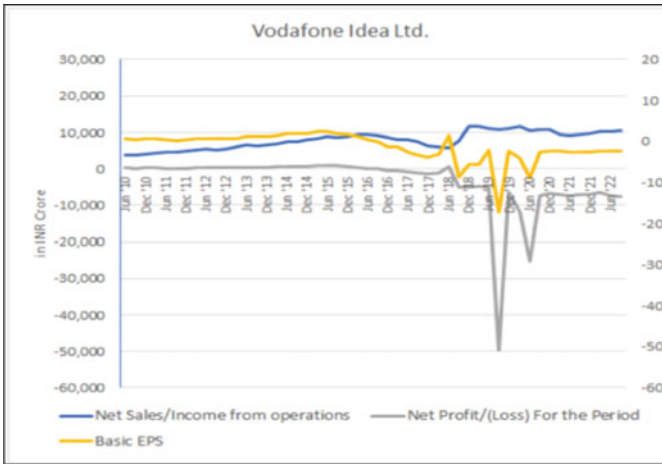
¹⁵ Press Trust of India (2022).

¹⁶ *Latency* refers to delay in network communication. 5G networks—unlike 4G networks which are transmitted through large radio towers %G uses small-cell antennas that can transmit significant data over short distances, via the use of an ultra-high-frequency spectrum (Keshri 2022).

¹⁷ A Latin phrase meaning—One conquers, who conquers oneself.

Appendix

Exhibit 1: Key Financial Indicators of Vodafone Idea Ltd. From 2010 to 2022 (Quarterly Figures)



Source Vodafone Idea Ltd., Quarterly reports (2010–2022). Note that the data before the merger years pertains to Vodafone India Limited

Exhibit 2: Terms of the Moratorium Offered by the Government of India to Vodafone Idea Ltd.

Reform Package : A Boost for Telecom Industry

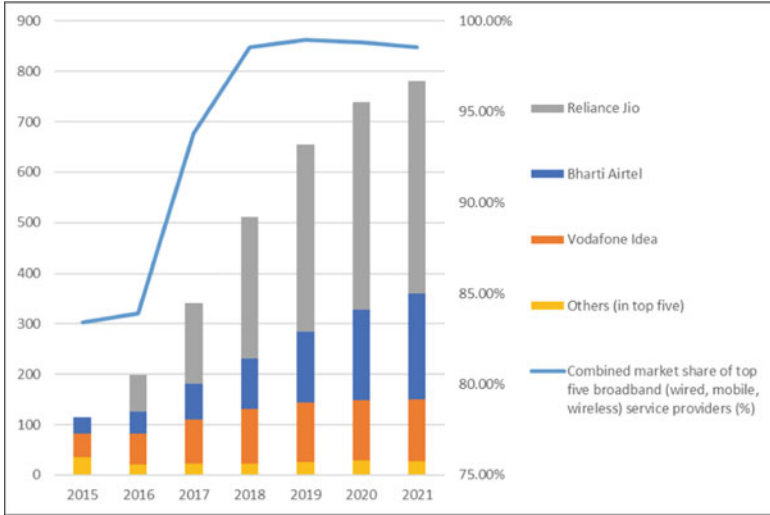
<p style="text-align: center; font-weight: bold;">Reforms to address the Liquidity</p>	<ul style="list-style-type: none"> • 4 years of Moratorium for AGR instalments and Spectrum Instalments due between Oct'21 and Sep'25 <ul style="list-style-type: none"> • VIL opted for deferment of AGR and Spectrum instalments for 4 years • Deferral of spectrum dues will result in liquidity of ~Rs. 589 billion over a period of 4 years (~Rs.147 billion annually). In discussion with DoT to determine the final amount of AGR in line with the SC order. • Operators have option to convert the interest on the deferred instalments, into equity upfront <ul style="list-style-type: none"> • Board of Directors, at its meeting held on 10th January, 2022, has approved the conversion of the full amount of such interest related to spectrum auction instalments and AGR Dues into equity • NPV of this interest is expected to be about Rs.16,000 crores as per VIL's best estimates, subject to confirmation by DoT • Post moratorium, Government has option to convert the due amount pertaining to such deferment into equity
<p style="text-align: center; font-weight: bold;">Structural and Procedural reforms</p>	<ul style="list-style-type: none"> • Reduction in Bank Guarantee requirements • Rationalisation of AGR definition, interest rate on LF&SUC payment and removal of penalty • Extension of spectrum tenure from 20 years to 30 years • No SUC on new spectrum acquired through auctions and no SUC on spectrum sharing • 100% FDI through Automatic Route <ul style="list-style-type: none"> • All reforms are beneficial to the industry • Reduction in Bank Guarantees will reduce the bank's exposure to VIL and help in various ongoing discussions with banks and other lenders

Reforms to enable industry to focus on returns and profitability

Note: Refer press release dated 09 September, 2021 on related announcement made by the Government.

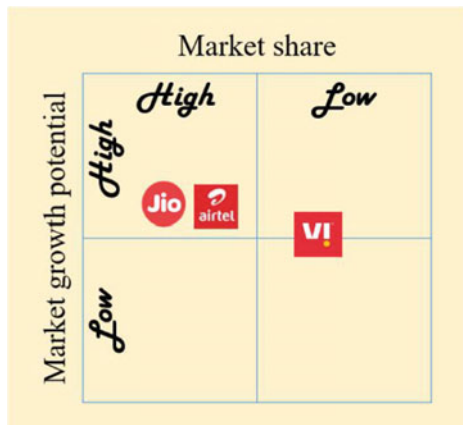
Source Vodafone Idea Limited (2022)

Exhibit 3: Subscribers (in Million) of Top Broadband Providers and Market Consolidation (%): Pre-Jio Entry to 2021



Source Reports of the Telecom Regulatory Authority of India (TRAI), 2016–2022

Exhibit 4: Vodafone Versus Its Major Competitors in January 2022



Source Vodafone Idea Limited (2022); CMIE Prowess, Keshri (2022)

Exhibit 5: Bharti Airtel Ltd.—Average Revenue Per User (ARPU) and Coverage: 2010–2011 to 2021–2022

Note Sub-GHz refers to networking technology that has longer range at lower transmission speeds, making it a good technology to use for Internet of Things applications.

Table A1.1 Bharti Airtel Ltd.—ARPU: 2010–2011 to 2021–2022

Quarter	ARPU (INR)	Quarter	ARPU (INR)
Q4'11	194	Q4'18	116
Q4'12	189	Q4'19	123
Q4'13	193	Q4'20	154
Q4'14	196	Q4'21	145
Q4'15	198	Q4'22	178
Q4'16	194	Q2'23	190
Q4'17	158		

Table A1.2 No. of wireless subscribers (million) of Bharti Airtel, as of March 2022, by service area

Bihar	37.15	Gujarat	11.91
Uttar Pradesh East	31.37	Punjab	11.07
Andhra Pradesh	30.66	Assam	10.04
Karnataka	27.4	Mumbai	9.69
Tamil Nadu	21.82	Kerala	7.73
Rajasthan	20.27	Haryana	5.92
Maharashtra	18.5	Kolkata	5.71
Uttar Pradesh West	16.24	Jammu and Kashmir	5.63
Delhi	15.78	North East	5.63
West Bengal	15.08	Himachal Pradesh	3.31
Madhya Pradesh	11.98		

Sources Bharti Airtel Limited, Quarterly reports (2011–2022); Bharti Airtel Ltd., Investor and Analyst Day 2022 Presentation (2022); Statista (2022)

Exhibit 6: Airtel's ARPU and Circle Coverage Strategy: 2021–2022

Sources Bharti Airtel Limited, Quarterly reports (2011–2022); Bharti Airtel Ltd., Investor and Analyst Day 2022 Presentation (2022); Statista (2022)

Exhibit 7: Bharti Airtel Ltd.—Equity Ownership: 2010–2011 to 2021–2022

Note 'Persons acting in concert as promoters (in %)—Shares held' and 'Shares held by Custodians (in %)' both had zero values, so have not been included.

Bharti Airtel Ltd.—equity ownership	10–11	11–12	12–13	13–14	14–15	15–16
(In %)—Shares held	100	100	100	100	100	100
Promoters	68.29	68.29	68.55	65.32	65.37	66.75
Indian promoters	45.5	45.5	45.75	43.67	43.72	45.09
Foreign promoters	22.8	22.8	22.8	21.66	21.66	21.66
Non-promoters	31.71	31.5	31.45	34.68	34.63	33.25
Non-promoter institutions (In %)—shares held	25.93	25.08	25.83	24.17	25.43	26.8
Non-promoter non-institutions (In %)—shares held	5.78	6.42	5.62	10.51	9.19	6.46
Bharti Airtel Ltd.—equity ownership	16–17	17–18	18–19	19–20	20–21	21–22
(In %)—Shares held	100	100	100	100	100	100
Promoters	67.14	67.14	67.14	58.98	55.86	55.93
Indian promoters	45.48	50.1	50.1	38.79	35.8	35.85
Foreign promoters	21.66	17.04	17.04	20.19	20.05	20.08
Non-promoters	32.86	32.86	32.86	41.02	44.14	44.07
Non-promoter institutions (In %)—shares held	26.4	30.87	30.86	36.16	38.98	38.91

(continued)

(continued)

Bharti Airtel Ltd.—equity ownership	16–17	17–18	18–19	19–20	20–21	21–22
Non-promoter non-institutions (In %)—shares held	6.46	1.99	2	4.87	5.16	5.16

Source CMIE prowest

Exhibit 8: Bharti Airtel Ltd., Annual Standalone Finance (INR Million): 2010–2011 to 2021–2022

Bharti Airtel Ltd. annual finance standalone	10–11	11–12	12–13	13–14	14–15	15–16
Sales	380,177	416,038	453,509	499,185	555,200	603,003
Total liabilities/total assets	796,311	901,466	995,061	1,120,348	1,438,861	1,922,537
Total expenses	307,926	365,175	417,533	443,702	475,300	543,723
Profit after tax	77,169	57,300	50,970	65,401	131,594	77,803
Total loans and advances	162,054	270,594	207,768	293,563	298,559	178,399
Directors' salary	123.7	95.8	100.6	137.9	221.4	250.7
Directors' bonus and commission	234.6	166.5	203.2	211.2	187.4	151.5
Directors' perquisites	0.4	19	4.9	7.9	4.7	11.8
Directors' retirement benefits						
Directors' contribution to PF						3
Executive directors' remuneration	316			290.8	325.2	340.7
KMP salary					67	37.9
KMP total remuneration					97.8	41.7
Equity dividend	3798	3798	3798	7195	15,390	8872
Preference dividend						
Dividends	3798	3798	3798	7195	15,390	8872
Bharti Airtel Ltd. annual finance standalone	16–17	17–18	18–19	19–20	20–21	21–22
Sales	622,763	536,630	496,060	543,171	643,501	706,664
Total liabilities/total assets	2,019,596	2,177,632	2,343,514	3,088,293	2,951,924	2,943,303
Total expenses	750,672	549,932	597,454	942,018	928,951	775,706
Profit after tax	– 99,256	792	– 18,692	– 360,882	– 251,976	– 36,250
Total loans and advances	231,717	267,734	395,971	478,234	259,650	208,612
Directors' salary	289.6	321.5	282.5	405	187	192.1
Directors' bonus and commission	196.1	157.4	144.3		102.7	164.9
Directors' perquisites	10.1	10.6	18.7	11.3	16.3	8.3
Directors' retirement benefits						
Directors' contribution to PF	4.5	6.2		28.5		
Executive directors' remuneration	425.5	471.6	519.1	496.2	306.1	306.5
KMP salary	49.9	52.5		36.6	46	44.1
KMP total remuneration	55.3	59.8		46.3	46	44.1

(continued)

(continued)

Bharti Airtel Ltd. annual finance standalone	16–17	17–18	18–19	19–20	20–21	21–22
Equity dividend	5436	15,350	19,988		10,911	
Preference dividend						
Dividends	5436	15,350	19,988		10,911	

Source CMIE prowess

Exhibit 9: Ratios

Bharti Airtel Ltd annual finance standalone	10–11	11–12	12–13	13–14	14–15	15–16
PBDITA as % of total income	36.59	34.87	32.84	34.91	41.57	38.71
Net profit margin (%)	19.72	13.6	10.89	13.1	21.73	12.45
Operating profit margin (non-financial cos.) (%)	35.83	33.98	30.73	34.15	36.23	36.92
Operating profit margin (financial cos.) (%)	4224.55	1334.12	489.54	1260.59	322.61	682.09
Return on net worth (%)	18.72	12.3	9.86	11.03	18.24	8.14
PAT as % of net worth	19.11	12.27	9.86	10.86	18.21	8.2
Return on capital employed (%)	15.47	9.52	7.67	9.16	14.94	6.02
Return on total assets (%)	10.73	6.77	5.38	6.3	10.32	4.6
Quick ratio (times)	0.43	0.48	0.53	0.56	0.67	0.27
Current ratio (times)	0.47	0.52	0.55	0.57	0.69	0.31
Debt to equity ratio (times)	0.27	0.31	0.26	0.16	0.28	0.41
Director's sitting fees and commission to non-executive director	0.8	0.9	1	1.2	3.3	3.4
Directors' remuneration/compensation to employees (times)	0.02	0	0	0.02	0.02	0.02
Equity dividend as % of PAT	4.92	6.63	7.45	11	11.7	11.4
Pref dividend as % of PAT	0	0	0	0	0	0
Dividend rate (%)	20	20	20	36	77	27.2
Bharti Airtel Ltd annual finance standalone	16–17	17–18	18–19	19–20	20–21	21–22
PBDITA as % of total income	16.31	36.06	36.16	– 31.83	39.93	49.48
Net profit margin (%)	9.99	0.22	– 14.1	– 42.57	– 38.2	– 3.84
Operating profit margin (non-financial cos.) (%)	39.33	35.08	25.8	– 16.08	36.8	49.95
Operating profit margin (financial cos.) (%)	376.29	48.4	– 327.18	– 2015.5	– 2045	
Return on net worth (%)	6.08	0.12	– 7.33	– 24.15	– 28.84	3.59
PAT as % of net worth	– 9.32	0.08	– 1.86	– 36.2	– 28.3	– 4.66
Return on capital employed (%)	4.07	0.07	– 4.2	– 11.97	– 11.71	– 1.27
Return on total assets (%)	3.28	0.06	– 3.26	– 8.87	– 8.5	– 0.95
Quick ratio (times)	0.23	0.23	0.16	0.48	0.45	0.39

(continued)

(continued)

Bharti Airtel Ltd annual finance standalone	16–17	17–18	18–19	19–20	20–21	21–22
Current ratio (times)	0.3	0.27	0.19	0.49	0.47	0.42
Debt to equity ratio (times)	0.59	0.64	0.85	1.18	1.83	1.83
Director's sitting fees and commission to non-executive director	4.1	3.5	3.3	7.8	10.1	13.1
Directors' remuneration/compensation to employees (times)	0.02	0.03	0.04	0.03	0.02	0.02
Equity dividend as % of PAT		1938.13				
Pref dividend as % of PAT		0				
Dividend rate (%)	20	50	50	40		

Source CMIE prowess

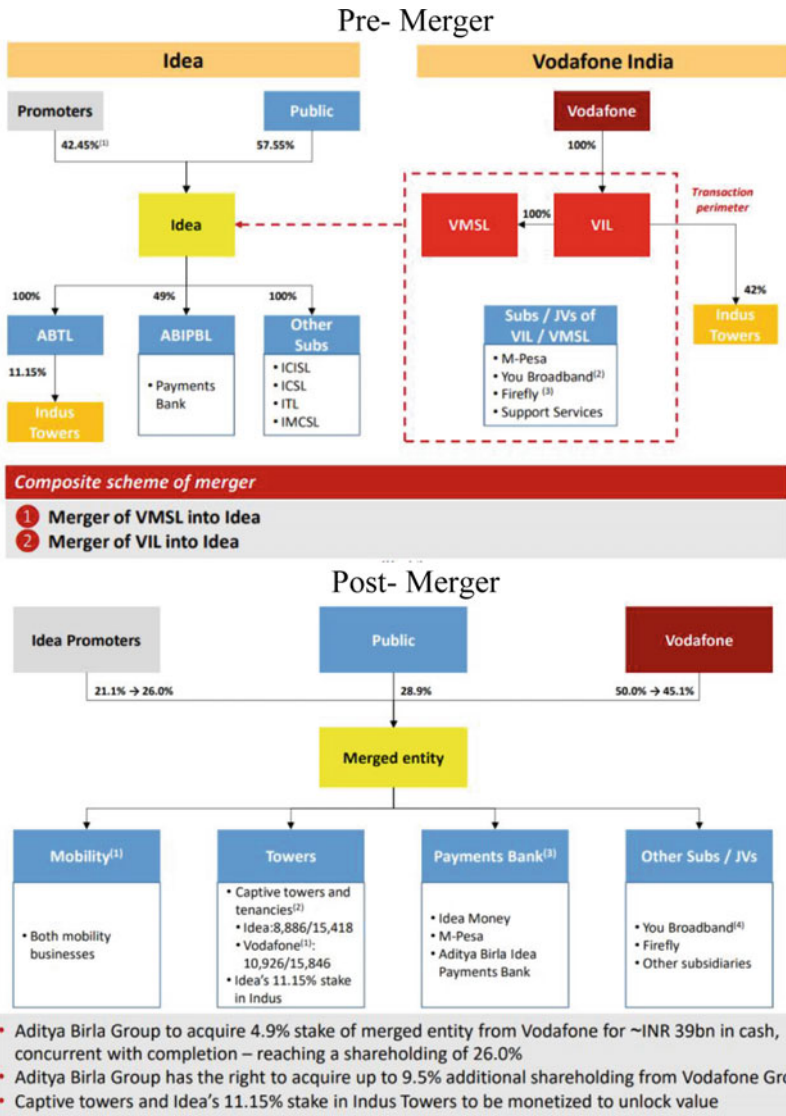
Exhibit 10: Bharti Airtel Ltd.—Board of Directors Composition: 2022

Note No information was included regarding their promoter/non-promoter status; that information has therefore been obtained from company annual reports and other sources.

Director name	Designation	Executive/ non-executive classification	Independent/ non-independent classification
Badal Bagri	Chief financial officer		
Chua Sock Koong	Director	Non-executive	Non-independent
Craig Ehrlich	Director	Non-executive	Independent
D K Mittal	Director	Non-executive	Independent
Gopal Vittal	Managing Director and CEO	Executive	Non-independent
Kimsuka Narasimhan	Director	Non-executive	Independent
Manish Kejriwal	Director	Non-executive	Independent
Nisaba Godrej	Director	Non-executive	Independent
Pankaj Tewari	Company secretary		
Rakesh Bharti Mittal	Director	Non-executive	Non-independent
Shishir Priyadarshi	Director	Non-executive	Independent
Soumen Ray	Chief financial officer		
Sunil Bharti Mittal	Chairperson and executive director	Executive	Non-independent
Tao Yih Arthur Lang	Director	Non-executive	Non-independent
V K Viswanathan	Director	Non-executive	Independent

Source CMIE prowess

Exhibit 11: Vodafone Idea Limited—Holding Structure Before and After the Merger



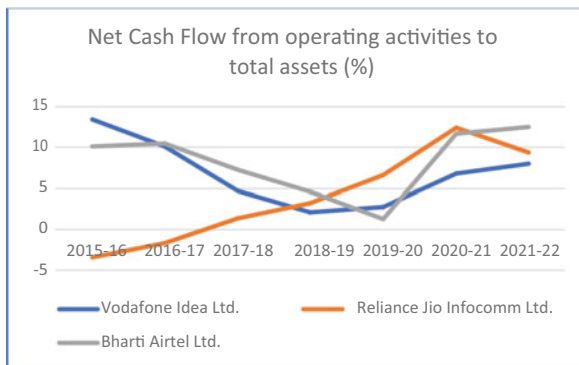
Source Vodafone Idea Ltd.—Investor presentations

Exhibit 12: Net Cash Flow from Operating Activities for the Top Three Telecom Players (INR Million)

Company name	10–11	11–12	12–13	13–14	14–15	15–16
Vodafone Idea Ltd	45,230.3	30,550.1	57,083.1	75,311.2	94,743.9	108,529
Reliance Jio Infocomm Ltd	– 190.9	– 208.6	– 2238.5	– 12,554.3	– 28,016.6	– 43,658.7
Bharti Airtel Ltd	132,932	114,378	138,847	160,220	179,809	194,499
Company name	16–17	17–18	18–19	19–20	20–21	21–22
Vodafone Idea Ltd	101,399.2	51,671	52,884	69,210	151,257	168,609
Reliance Jio Infocomm Ltd	– 34,060	35,700	66,580	165,820	326,040	312,870
Bharti Airtel Ltd	211,655	159,543	108,121	40,264	343,923	369,253

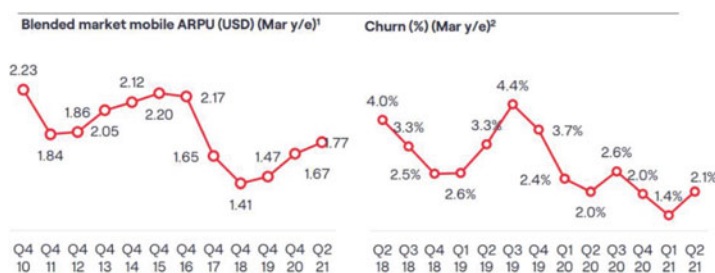
Source CMIE prowess

Exhibit 13: VIL’s Liquidity in Comparison to Its Competitors: F.Y. 15–16 to F.Y. 21–22



Source CMIE prowess

Exhibit 14: Vodafone Idea Ltd.—Average Revenue Per User (ARPU) and Churn Rate: 2010–2011 to 2021–2022



Source Vodafone Idea Ltd.—Investor presentations (collated from *TRAI Financial Reports*)

Exhibit 15: Vodafone Idea Ltd.—Equity Ownership: 2010–2011 to 2021–2022

Vodafone Idea Ltd	10–11	11–12	12–13	13–14	14–15	15–16
Equity ownership						
(In %)—shares held promoters	46.04	45.96	45.88	45.81	42.27	42.24
Indian promoters	46.04	45.96	45.88	45.81	42.27	42.24
Foreign promoters	0	0	7.49	44.78	53.57	53.57
Non-promoters	53.96	54.04	54.12	54.19	57.73	57.76
Non-promoters institutions (In %)—shares held	17.81	21.46	22.06	21.92	29.23	29.35
Non-promoter non-institutions (In %)—shares held	36.15	32.58	32.06	32.27	28.5	28.41
Vodafone Idea Ltd						
Equity ownership						
(In %)—shares held promoters	42.4	42.57	71.32	72.05	72.05	74.99
Indian promoters	42.4	35.08	26.54	18.48	18.48	16.53
Foreign promoters	58.46					
Non-promoters	57.6	57.44	28.68	27.95	27.95	25.01
Non-promoters institutions (In %)—shares held	33.8	38.37	17.6	14.83	5.67	5.27
Non-promoter non-institutions (In %)—shares held	23.8	19.07	11.08	13.12	22.28	19.74

Source CMIE proweiss

Exhibit 16: Vodafone India Airtel Ltd.—Annual Standalone Finance: 2010–2011 to 2021–2022 (in INR Million)

Annual finance standalone	10–11	11–12	12–13	13–14	14–15	15–16
Sales	153,328.1	192,753.2	220,434.4	261,205.6	312,671.3	357,901.6
Total assets	295,989.9	323,952.9	358,695.2	450,811.1	591,703.8	809,779.4
Total expenses	146,621.3	187,839.5	213,386.8	247,268.5	289,219.7	333,833.6
Profit after tax	8446	5765.4	8182.6	16,893.1	28,098.4	26,462.9
Total loans and advances	20,786.1	38,548.7	39,501.5	41,702.7	56,001.1	31,492.1
Directors' salary	76.6	24.8	87.5	32.1	47.6	84.2
Directors' bonus and commission		8.3		30.5	290.1	150
Directors' perquisites						3.1
Directors' retirement benefits						2
Directors' contribution to PF						
Executive directors' remuneration	76.6	0		93.3	87.8	90.7
KMP salary					26.6	28.1
KMP total remuneration					36.5	30.4
Equity dividend			994.3	1328.6	2269.4	2159.6
Preference dividend						
Dividends			994.3	1328.6	2269.4	2159.6
Annual finance standalone	16–17	17–18	18–19	19–20	20–21	21–22
Sales	352,640.5	278,088	368,015	447,041	416,710	382,153
Total assets	1,003,080.1	1,105,919	2,529,788	2,536,319	2,238,491	2,120,437
Total expenses	363,218.1	329,694	565,283	1,195,125	886,806	667,334
Profit after tax	– 8310.8	– 44,583	– 140,553	– 731,315	– 462,937	– 282,372
Total loans and advances	47,931.2	53,070	189,421	186,740	179,913	150,608
Directors' salary	89.8	110.3	117.6	72.3		
Directors' bonus and commission		34.1				
Directors' perquisites	3.2		27.2	1.1		
Directors' retirement benefits	2.2		2.6	0.9		
Directors' contribution to PF						
Executive directors' remuneration		144.4	86.4			
KMP salary	7.5	8.8	11.2	67.2	58.1	64.7
KMP total remuneration	8.2	11.9	11.8	69.4	59.5	66.1
Equity dividend	2160.6					
Preference dividend						
Dividends	2160.6					

Source CMIE propress

Exhibit 17: Ratios

Annual finance standalone	10-11	11-12	12-13	13-14	14-15	15-16
PBDITA (% of total income)	21.26	22.76	23.99	29.05	32.37	34.24
Net profit margin (%)	5.27	2.76	3.57	6.15	8.86	7.29
Operating profit margin of non-financial companies (%)	20.48	22.42	23.63	28.25	31.41	33.8
Operating profit margin of financial companies (%)	774.54	2406.24	1900.19	1183.56	983.38	1917.88
Return on net worth (%)	6.85	4.22	5.85	10.94	15	11.26
PAT as % of net worth (%)	7.1	4.56	6.07	11.41	15	11.34
Return on capital employed (%)	3.98	2.22	3.03	5.23	6.79	4.64
Return on total assets (%)	3.11	1.72	2.31	4	5.39	3.75
Quick ratio (times)	0.35	0.24	0.36	0.28	0.89	0.27
Current ratio (times)	0.41	0.34	0.43	0.34	0.92	0.28
Debt to equity ratio (times)	0.86	0.94	0.92	1.24	1.18	1.64
Director's sitting fees and commission to non-executive director	1	1.2	1.2	1.4	2.7	3.1
Directors' remuneration/compensation to employees (Times)	0.01	0	0	0.01	0.02	0.02
Equity dividend as % of PAT	0	0	12.15	7.86	8.08	8.16
Pref dividend as % of PAT	0	0	0	0	0	0
Dividend rate (%)	0	0	3	4	6	6
Annual finance standalone	16-17	17-18	18-19	19-20	20-21	21-22
PBDITA (% of total income)	29.54	22.72	16.71	- 34.65	- 10.01	41.08
Net profit margin (%)	- 2.43	- 15.87	- 42.03	- 89.1	- 105.13	- 74.03
Operating profit margin of non-financial companies (%)	29.09	20.77	11.3	33.34	- 6.48	40.65
Operating profit margin of financial companies (%)	- 635.43	- 1064.65	- 1798.11	- 2396.42	- 9589.34	- 21,472.15
Return on net worth (%)	- 3.55	- 17.06	- 34.73	- 114.57		
PAT as % of net worth (%)	- 3.43	- 16.85	- 30.67	- 204.74		
Return on capital employed (%)	- 1.19	- 5.44	- 11.55	- 24.12	- 28.16	- 18.03
Return on total assets (%)	- 0.95	- 4.31	- 8.82	- 16.19	- 18.57	- 13.07
Quick ratio (times)	0.36	0.76	0.23	0.15	0.14	0.19
Current ratio (times)	0.36	0.81	0.23	0.15	0.14	0.19
Debt to equity ratio (times)	2.32	1.99	2.02	15.8		
Director's sitting fees and commission to non-executive director	3.9	3.7	3.9	9.8	8.2	10.4
Directors' remuneration/compensation to employees (Times)	0	0.01	0	0	0	0
Equity dividend as % of PAT						
Pref dividend as % of PAT						
Dividend rate (%)	0	0	0	0	0	0

Source CMIE propress

Exhibit 18: Vodafone India Ltd.—Board of Directors Composition: 2022

Director name	Designation	Executive/ non-executive classification	Independent/ non-independent classification
Akshaya Moondra	Chief financial officer		
Arun Adhikari	Director	Non-executive	Independent
Arun Thiagarajan	Director	Non-executive	Independent
Ashwani Windlass	Director	Non-executive	Independent
D Bhattacharya	Director	Non-executive	Non-independent
Diego Massidda	Director	Non-executive	Non-independent
Himanshu Kapania	Chairperson	Non-executive	Non-independent
Krishna Kishore Maheshwar	Additional Director	Non-executive	Non-independent
Krishnan Ramchandran	Director	Non-executive	Independent
Kumar Mangalam Birla	Chairperson	Non-executive	Non-independent

Source CMIE prowess

Teaching Note

Synopsis and Use

This case deals with a technology-dynamic industry (Telecommunications), which has seen the transition from being exclusively in the public domain post-independence, to opening up to private participation towards the end of the twentieth century—and over the past 5 years, towards increasing consolidation (post the entry of Reliance Jio Ltd. in September 2016). The case presents two dilemmas to the participants and is designed to be conducted as a two-stage discussion.

The first round focuses on a managerial dilemma from the perspective of a loss-making leading private player—Vodafone India Ltd. (VIL)—and its stakeholders. The decision is to be made in the context of January 2022, where the Board of Directors could have been weighing the prospects of liquidation versus continuation in business with the acceptance of the moratorium on spectrum payments offered by the Government of India. The second round follows the first and is intended to make participants appreciate the consequences of VIL's possible exit and further consolidation of market power in the telecom sector. This is aimed to be an exercise in critical thinking about the future of the telecom market which is increasingly turning into a critical sector, with hitherto non-digitized sectors/services rapidly going virtual in India.

Position in Course

This case was developed for students studying corporate governance and public policy. It focuses on the internal (strategic and financial) and external (welfare) implications of corporate decision-making on digital access, in the face of competitive pressure. It allows the instructor some flexibility in deciding rigour of the discussion, thus making it ideal for both undergraduate and postgraduate courses (in either public policy or in corporate strategy). Additionally, it would also be suitable for a Management Development Programme, as well as in company training programmes.

This is a data-intense and concept-heavy case. The potential of discussion depth may be best realized if it is positioned towards the middle of the course or programme, when these topics are typically introduced.

Learning Objectives

The discussion around the managerial dilemma of this case is aimed enabling students to.

1. *Analyse strategic decision-making in the face of a 'crisis'/'emergency' with respect to stakeholder interests and principal-agent Conflicts.*

The discussion around the public dilemma of this case is aimed enabling students to

2. *Examine costs of further decrease in competitiveness in the telecom sector in a post-covid (highly digitized) world.*

Teaching Plan

The case discussion has to be in two stages, each referring to the two learning objectives outlined above. All discussion has to be in adherence to the data on finances and ownership structure presented as Exhibits in the case.

Round 1

The first round of discussion will be around the managerial dilemma, where participants will evaluate the prospects facing VIL in January 2022 (liquidation versus continuation in business). The following prospects are likely to emerge, which need to be analysed using the 2×2 matrix presented below:

Possible Strategic Options

Raise funds from promoter groups

- Raise funds from creditors
- Exist as a publicly owned company
- Liquidate.

Further, if the Board decides that VIL will continue in business, they would also need to examine strategies relating to their nature of presence. Some examples are

- Brand loyalty (compete with Airtel) versus Price competition (compete with Jio)
- Full presence (5G rollout) vs. Limited presence (2G, 4G only)

Profitability	India's Telecom Market	
	Stay	Quit
Profit		
Loss		

To ensure the discussion results in meeting the learning objective (1) noted above, the instructor may need to moderate the discussion to include the following dimensions:

- stakeholder interests and principal-agent conflicts
- further implications for 5G rollout

The end of Round One can involve a voting exercise. All participants vote as Members of the Board (equal weight) on the strategic options that emerge from the discussion.

Round 2

The second round will be a shorter one and the discussion will be from an economic welfare perspective. After the voting concludes, participants will be asked to step out of the shoes of the Board of Directors of VIL and think about the implications of VIL's exit on the outcomes for the telecom market.¹⁸ Specifically, they are expected to examine the fallouts of increased market consolidation if VIL ceases to remain as competitor to Jio and Airtel: (a) In which scenario were markets more competitive? (b) Which is preferable from a public policy standpoint, and why?

Assignment Questions

ROUND #1: THE FIRM PERSPECTIVE

- (1) Should VIL go for the moratorium on dues?
- (2) Are the possibilities of future gains from a 5G rollout large enough to outweigh current losses of continuing in business?

¹⁸ If economics students are present in the classroom—this can be referred to as the general equilibrium perspective.

- (3) How will the nature of governance and promoter incentives change if the government decides to convert VIL's dues to equity?

ROUND #2: THE ECONOMY'S PERSPECTIVE

- (1) What are the welfare costs of a highly consolidated telecom sector for India, versus were VIL to continue to operate?

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Chapter 8

Revealed Comparative Advantage of ICT Services: Pre- and Post-COVID Era



Sapna Parihar and Rekha Melwani

8.1 Introduction

The international trade gives significant contribution in the world economic growth. The economies which are more liberal to trade are likely to grow faster, which results in reduced poverty. Governments always give efforts to analyze various sectors which contribute in the economy and ensure the growth of significant sector. Export services form an increasingly vital engine for international trade and give significant contribution in the economy.

The service sector is considered to be the fastest growing sector in the world trade. World top export services are travel, miscellaneous business services, transport, telecom/computer/information services, financial services, intellectual property use, insurance/pension services, construction, maintenance/repair services, government goods and services, etc. The study by Kaliappan et al. (2017) highlighted that service exports are considered as a source of income specifically for developing economies. Economies which are open to international trade are likely to grow faster, provide higher income, innovate, improve productivity, and create more opportunities to their people. The open economies/trade offers many benefits to lower-income households, viz. affordable goods and services. Those nations which are integrated with cross border economies will facilitate to enhance the economic growth and reduce poverty at the global level as well as at the local level.

Information and Communications Technology (ICT) is one of the sectors where its services are being offered in global market. ICT has drastically changed the lives of people, communication, and the work methodologies. United Nations Conference on Trade and Development (UNCTAD) has mentioned ICT services which includes Telecommunications, Sales and marketing services, Computer Services (including computer software), not including trade and leasing services, Insurance,

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Information, Financial, Licensing, Management administrative services, R&D, Engineering, related technical, Education and training services. ICT has been one which continuously gained global market attention.

Growth in information and communication technologies has given unparalleled opportunities to service providers in developing as well as developed countries. The telecom, computer, and information services are one of the top exported sectors. Chief exporter of telecommunications services is USA. The developing countries have tremendous prospectus in reference with the ICT service exports. As most of the countries have demographical dividend as the larger portion of population is youth (Saif et al. 2021).

As stated by the study (Jafrin and Masud 2020) that young people have the aptitude to acquire knowledge regarding technological applications very easily. This will facilitate to build a knowledge-based information society to develop ICT services. Besides, countries like India, Pakistan, and Bangladesh have a relatively large in-house labor force. These countries can leverage the ongoing demographic dividend and internal labor force to enhance the ICT services sector.

In year 2019 and beginning of year 2020, COVID-19 has been spreading all over the world, and world trade has been hit hard owing to that the development of foreign trade had brought several challenges. The international trade of manufacturing as well service sector has been affected. The present study is an attempt to measure the Revealed Comparative Advantage (RCA) in selected Asian economies in reference with the ICT products with pre- and post-COVID period.

8.2 Review of Literature

Number of research studies has been conducted to measure the performance and intensity of export of various products and services. Revealed Comparative Advantage (RCA) is one of the accepted indexes to measure the variations in exports according to different sectors and economy. Several research studies used relative comparative advantage to measure competitiveness.

The Index of Revealed Comparative Advantage (RCA) has been frequently utilized to quantify competitive advantage in service sector (Saptana et al. 2022). The service sector of Asian countries has the potential to become new engine of economic growth (Park and Shin 2012). Traditionally, these countries are relied on export oriented manufacturing to enhance growth. The study by Park and Shin (2012) on twelve Asian economies and found that the service sector substantially contributed to the economic growth of the respective countries in the past. The study provided strong evidence about the service sector as an accelerator in Asian countries economic growth.

The paper by Langhammer (2004) stated that evaluation of Revealed Comparative Advantages (RCAs) in foreign trade services cannot be match up to RCA in trade in goods. The vital discrimination observed was that the services are traded internationally mostly subject to relative resource endowment as well as by movements of

factors, i.e., primarily foreign direct investment. This paper used RCA for measurement for the USA, EU, and Japanese service trade. Burange et al. (2015) analyzed the Indian service export through Revealed Comparative Advantage (RCA), Trade Complementarity Index (TCI), and Trade Specialization Index (TSI) and for the period 2001–2010 and depicted that India experienced competitiveness in knowledge and skill-based services rather than labor intensive services, also India has export competitiveness in computer and information services with low degree of TSI in information services. Hisanaga (2008) looked at the RCA for service export from the USA and found that in knowledge-based services, the USA enjoys a significant comparative advantage. Seyoum (2007) also used RCA technique to see the export performance of competitiveness of specific services such as travel services, business, transport, and financial services in developing countries for 1998–2003.

The study by Rajesh (2020) investigated the trends, growth, and Revealed Comparative Advantage of ICT service export of India for the period 2005–2018. The results of the study showed that the estimated RCA index of India demonstrated tremendous potential in manufacturing as well as export of ICT trade flow. The intensity of RCA of India had shown decline trends over the study period despite that Indian trade showed much more potential than the world average, i.e., almost 7 times higher. Mallick (2016) measured the RCA of ICT industry for India and China and revealed that India enjoyed comparative export advantage than China. Involvement of China to ICT services is restricted because of high demand in the domestic market, and India may have an opportunity to further explore global market. But India's share in the ICT market has also been decreased over the period of time. This result was also supported by Cunha and Forte (2017) where study analyzed comparative advantage in service sector for ten biggest developing countries and depicts that India has shown a comparative advantage in ICT services while Thailand, Macao, and Turkey have shown a comparative advantage in travel services, on the other hand China, Hong Kong, India, and Taiwan have a comparative advantage in other services. Korea has a comparative advantage in construction and transportation services, and Singapore has a comparative advantage in financial and transportation services. Khurana and Nauriyal (2017) analyzed comparative advantage between 2004 and 2013, using modified revealed symmetric comparative advantage index and conclude that ICT services and business services shown extreme comparative advantage in India. Research also employed Galtonian regression and the Markovian transition matrices to investigate the export patterns in reference with the supply chain dynamics.

The Study by Mena et al. (2022) evaluated the trade flexibility during pandemic through Fuzzy-set Qualitative Comparative Analysis and found that the factors like social and economic globalization, national government response, logistics performance, income level, and healthcare preparedness affect international trade resilience and how these factors contributed to strengthen (weaken) the international trade and impact of pandemic on international trade. Study by Dowling and Ray (2000) on Asian countries with respect to international trade and foreign investment patterns and the study explored key challenges in export-driven growth and the causes of changing patterns in international trade.

8.3 Research Gap

The reviewed literature found that there is a lack of studies in South Asian Trade of ICT Services for the most recent export data. Further, there is lack of empirical analysis that how pandemic affected export of these services. The present study therefore analyzes the export advantage of ICT services for selected Asian economies.

8.4 Objective of the Study

The objective of the study is to measure the export advantage of ICT services, which include telecommunications, computer, and information services by RCA using Balassa Index between pre-COVID (2017–2018) and post-COVID (2019–2020) for selected Asian economies.

8.5 Methodology

To see export advantage of ICT services, secondary data for the selected economies has been extracted from trade map (Trade Statistics for International Business Development), a database which provides Trade Statistics for International Business Development for more than 220 countries. The Asian region includes forty seven countries and among those top five Asian economies have been selected for the study on the basis of highest Gross Domestic Products (GDP). These economies are India, China, Japan, Republic of Korea, and Indonesia. The export advantage has been measured through Revealed Comparative Advantage and RSCA.

Gross domestic product				
Country	Last	Previous	Reference	Unit
China	17,734	14,688	Dec 2021	USD Billion
Japan	4937	5040	Dec 2021	USD Billion
India	3173	2668	Dec 2021	USD Billion
South Korea	1799	1638	Dec 2021	USD Billion
Indonesia	1186	1059	Dec 2021	USD Billion

Reference: <https://tradingeconomics.com>

The trend of international foreign trade among the countries is measured by their relative differences in the production and services which is the basis of Ricardian trade theory. Although it is challenging to notice such production differences, an RCA metric may be easily constructed using trade data to show such variances. The RCA index is devised in cross-border economies to calculate the relative gain or

difficulty of a particular country in a particular product or service categories. The method has been conceptualized on Ricardian Comparative Advantage. It is widely used method and also known as Balassa Index, pioneered by Béla Balassa and Mark Noland in the year 1965.

RCA can be expressed in the following terms:

$$RCA_{ij} = \left(\sum X_{ij} / \sum X_i \right) / \sum X_{wj} / \sum X_w,$$

where X_{ij} = Export of j th industry by i th country

X_i = Total industry export by i th country

X_{wj} = World commodity export of j th industry

X_w = Total industry export by world.

The RCA index lies between 0 and ∞ . If the value of calculated RCA index is greater than one, then it depicts that country has revealed comparative advantage in export of product and if the value of calculated RCA index is lesser than one then that indicates the country shows its comparative disadvantage capability in the product. The calculated RCA method was further redefined by Dalum et al. (1998), Laursen and Widodo and modified as Revealed Symmetric Comparative Advantage (RSCA), which can be represented as

$$RSCA_{ij} = (RCA_{ij} - 1) / (RCA_{ij} + 1).$$

The value of RSCA lies between -1 and $+1$. RSCA shows the revealed symmetric comparative advantage of nation for any product categories if its value is more than zero and shows disadvantage if value of RSCA is less than zero.

8.6 Results and Analysis

Table 8.1 shows the RCA of ICT products in India during pre- and post-COVID era. The values show that India has comparative advantage in export of ICT product as both calculated RCA are > 1 . But this advantage has been decreased as pre-COVID the calculated RCA is 2.98, but post-COVID the RCA has been decreased till 2.61.

Table 8.2 shows the RCA of ICT products in China during pre- and post-COVID era. The values show that China has comparative advantage in export of ICT product as both calculated RCA are > 1 . This advantage has been increased as pre-COVID the calculated RCA was 1.54 and post-COVID the RCA has been increased till 1.64.

Table 8.3 shows the RCA of ICT products in Japan during pre- and post-COVID era. The values show that Japan has very modest comparative advantage in export of ICT product. This advantage has been increased as pre-COVID the calculated RCA is 0.27, but post-COVID the RCA has been increased till 0.37.

Table 8.1 Post-COVID RCA for India (US dollar thousand)

Year	ICT export from India	Total export from India	ICT export from world	Total export from world	RCA _{India}
	X_{ij}	X_i	X_{wj}	X_w	
2019	64,933,264	214,761,540	680,072,160	6,217,451,181	2.61
2020	68,248,229	203,252,810	683,392,684	4,966,257,918	
Total	133,181,493	418,014,350	1,363,464,844	11,183,709,099	

Pre-COVID RCA for India

2017	54,382,200	185,294,014	534,025,917	5,521,729,371	2.98
2018	58,194,658	204,955,579	632,940,030	6,079,852,126	
Total	112,576,858	390,249,593	534,025,917	5,521,729,371	

US dollar thousand

Table 8.2 Post-COVID RCA for China

Year	ICT export from China	Total export from China	ICT export from world	Total export from world	RCA _{China}
	X_{ij}	X_i	X_{wj}	X_w	
2019	53,784,864	283,192,179	680,072,160	6,217,451,181	1.64
2020	59,033,998	280,628,773	683,392,684	4,966,257,918	
Total	112,818,862	563,820,952	1,363,464,844	11,183,709,099	

Pre-COVID RCA for China

2017	27,767,414	228,090,293	534,025,917	5,521,729,371	1.54
2018	47,067,871	271,450,838	632,940,030	6,079,852,126	
Total	74,835,285	499,541,131	534,025,917	5,521,729,371	

US dollar thousand

Table 8.3 Post-COVID RCA for Japan

Year	ICT export from Japan	Total export from Japan	ICT export from world	Total export from world	RCA _{Japan}
	X_{ij}	X_i	X_{wj}	X_w	
2019	6,974,700	207,420,900	680,072,160	6,217,451,181	0.37
2020	9,718,722	160,287,410	683,392,684	4,966,257,918	
Total	16,693,422	367,708,310	1,363,464,844	11,183,709,099	

Pre-COVID RCA for Japan

2017	5,067,300	186,879,200	534,025,917	5,521,729,371	0.27
2018	4,893,300	194,130,100	632,940,030	6,079,852,126	
Total	9,960,600	381,009,300	534,025,917	5,521,729,371	

US dollar thousand

Table 8.4 shows the RCA of ICT products in Korea during pre- and post-COVID era. The values show that Korea has very modest comparative advantage in export of ICT product. This advantage has been increased as pre-COVID the calculated RCA is 0.53, but post-COVID the RCA has been increased till 0.56.

Table 8.5 shows the RCA of ICT products in Indonesia during pre- and post-COVID era. The values show that Indonesia has very modest comparative advantage in export of ICT product. This advantage has been increased as pre-COVID the calculated RCA is 0.40, but post-COVID the RCA has been increased till 0.45.

Analysis of Impact of Pandemic on RCA

To measure the impact of pandemic on Revealed Comparative Advantage paired sample *t*-test has been used for pre-COVID (2017–2018) and post-COVID (2019–2020).

Data: Pre-COVID (2017 and 2018) and post-COVID (2019 and 2020)

Table 8.4 Post-COVID RCA for Republic of Korea

Year	ICT export from Korea	Total export from Korea	ICT export from world	Total export from world	RCA _{RepKorea}
	X_{ij}	X_i	X_{wj}	X_w	
2019	6,160,326	99,220,379	680,072,160	6,217,451,181	0.56
2020	6,619,650	87,274,298	683,392,684	4,966,257,918	
Total	12,779,976	186,494,677	1,363,464,844	11,183,709,099	
Pre-COVID RCA for Republic of Korea					
2017	4,579,500	89,701,300	534,025,917	5,521,729,371	0.53
2018	5,129,000	99,057,200	632,940,030	6,079,852,126	
Total	9,708,500	188,758,500	534,025,917	5,521,729,371	

US dollar thousand

Table 8.5 Post-COVID RCA for Indonesia

Year	ICT export from Korea	Total export from Korea	ICT export from world	Total export from world	RCA _{Indonesia}
	X_{ij}	X_i	X_{wj}	X_w	
2019	1,320,696	31,641,579	680,072,160	6,217,451,181	0.45
2020	1,275,681	14,906,501	683,392,684	4,966,257,918	
Total	2,596,377	46,548,080	1,363,464,844	11,183,709,099	
Pre-COVID RCA for Indonesia					
2017	996,738	25,327,655	534,025,917	5,521,729,371	0.40
2018	1,225,741	31,206,849	632,940,030	6,079,852,126	
Total	2,222,479	56,534,504	534,025,917	5,521,729,371	

US dollar thousand

Table 8.6 Showing relative comparative advantage (RCA) of selected economies

Countries	RCA pre-COVID	RCA post-COVID
China	1.54	1.64
Japan	0.27	0.37
India	2.98	2.61
Republic of Korea	0.53	0.56
Indonesia	0.40	0.45

$$t = 0.20208, df = 4, p\text{-value} = 0.8497$$

Alternative hypothesis: true difference in means is not equal to 0

95 Percent Confidence Interval: -0.2293063 0.2653063

Sample Estimates: mean of the differences 0.018.

Table 8.6 depicts RCA of all selected economies during pre- and post-era of pandemic. Further to find the impact of pandemic on RCA, paired sample t-test has been used through R software. The analysis shows value of $t = 0.20$, which is insignificant as $P = 0.84 > 0.05$. Therefore, it can be revealed that COVID had insignificant impact on RCA.

The value of RSCA lies between -1 and $+1$. RSCA shows the revealed symmetric comparative advantage of nation for any product categories if its value is more than zero and shows disadvantage if value of RSCA is less than zero. Table 8.7 shows Revealed Systematic Comparative Advantage (RSCA) of selected economies, viz. India, China, Japan, Republic of Korea, and Indonesia which clearly depicts that Japan, Korea, and Indonesia do not have advantage in export of ICT services neither pre- nor post-COVID era as RSCA values for these countries are negative. While China and India showed comparative advantage in export of ICT services both in pre- and post-COVID era as RSCA values for these countries are positive.

Table 8.7 Systematic comparative advantage (RSCA) of selected economies

Countries	RCA pre-COVID	RSCA pre-COVID	RCA post-COVID	RSCA post-COVID
China	1.54	0.21	1.64	0.24
Japan	0.27	-0.57	0.372	-0.45
India	2.98	0.49	2.61	0.44
Republic of Korea	0.53	-0.30	0.56	-0.28
Indonesia	0.40	-0.42	0.45	-0.37

8.7 Conclusion and Discussion

In the dynamic era of digitalization and the fourth industrial revolution, ICT services are acting as a catalyst for economic development. South Asian countries have sufficient prospects regarding ICT service exports. Country like India has larger portion of young people, and youth is more likely to acquire technology up gradation and knowledge which may result in increased of export volume of ICT service expansion. A country is assumed to be a competitive producer and exporter of goods when it has a revealed comparative advantage (RCA) compared to a nation producing and exporting that goods at or less than worldwide estimations.

A country is considered to be at significant strong trade position in a specific product categories if it embraces a revealed comparative advantage in it. Therefore, export of countries strength in any product can be directly proportional to its RCA.

The present study finds the advantage of exporting ICT services from selected Asian countries named India, China, Japan, Korea, and Indonesia. It can be concluded that India and china have advantage in ICT export especially India shows greater advantage as compared to other countries. Rahman and Rahman (2021) also found significant upward trend growth for the period of 2018–2025 in ICT export service in India using trend analysis.

When compared to other economies in South Asia, China, and India have a competitive advantage due to their proactive international competitiveness, regulatory framework, and policy reforms. South Asian nations have the opportunity to compete in a variety of services on a disaggregated level as they open their economies to services trade. In the manufacturing and export of ICT services, India possessed a very significant comparative advantage in recent years.

However, all the selected South Asian economies showed gradual improvement in the competitive advantage except India. India's comparative advantage in the ICT sector has been gradually losing strength over time. Therefore, there is a strong need to bring the effective policies to cushion the ICT market otherwise the market soon diminish and strong competitors like China overtake it.

India and china both are taking lead in development and innovations in ICT-enabled services. Tseng (2014) compared and supported the growth in China and India's ICT innovation capacity and knowledge transfer. The ability for ICT innovation is expanding in both China and India due to plentiful sources of expertise for ICT innovation. In terms of both number and quality of invention, China is superior to India. China and India, both have more inventive patents than they do owned ones, whereas India has certain relative innovation advantages in the technological area of telecommunications.

8.8 Implications of the Study

The present study has an objective to measure the export advantage of ICT services, which include telecommunications, computer, and information services by RCA using Balassa Index and RSCA between pre-COVID (2017–2018) and post-COVID (2019–2020) for selected Asian economies. The results of the study are limited to the top five GDP economies in Asian region. Therefore, further Asian economies may be included with diversified products which may give broader picture of the Asian region.

The future directions of the study may cover various products and services further analysis may include the growth of the exports in the developing economies. Countries where the comparative advantage could not found for ICT products, RCA and RSCA for other products can be measured. RCA and RSCA can further be applied to find out the products which create export advantage for the relevant country. Other indices such as RCAI, Trade Balance Indices (TBI) can also be calculated.

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Chapter 9

Modeling Barriers to the Adoption of Blockchain Technology in the Indian Healthcare Sector: An Integrated Fuzzy-Dematel Approach



Anam Fatima and Saboohi Nasim

9.1 Introduction

We live in an era of rapid shift, and the world around us is changing incredibly. Novel technologies in the twenty-first century significantly impact how people live, socialize, and work. These developments and breakthroughs challenge conventional delivery, business, and payment methods. If history is any guide, our immediate future will change quickly. It's a change humans expect. New technologies are causing significant changes. Blockchain technology is said to be a revolution on par with the Internet. The Internet alleviated information and communication difficulties, but there were particular challenges it couldn't address, such as trust and intermediaries. Blockchain technology can help with these issues.

The decentralization of the web and the disintermediation of many online services will be enabled by blockchain technology. Automated data processing and IoTs have changed how we store, remember, and recall information. Don Tapscott says blockchain goes beyond finance. Blockchain technology opens healthcare to change (Bell et al. 2018).

Blockchain technology is a distributed ledger technology that allows for secure, transparent, and tamper-proof storage and transfer of data. It was first introduced in 2008 as a means of creating a decentralized, digital currency called Bitcoin, but has since been applied to a wide range of industries beyond finance.

At its core, a blockchain is a chain of blocks, where each block contains a record of transactions. Each block is connected to the previous block through a cryptographic hash function, creating a digital chain. Once a block is added to the chain, it cannot be altered or deleted, ensuring the integrity of the ledger.

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Blockchain technology has many potential applications beyond finance, including healthcare, logistics, and identity management. It can be used to create secure and transparent systems for managing health records, tracking the movement of goods in the supply chain, and verifying the authenticity of identities.

However, blockchain technology is not a silver bullet and has its own set of challenges. For example, scalability, interoperability, and regulatory frameworks are some of the issues that need to be addressed before it can be widely adopted. Nonetheless, the potential benefits of blockchain technology are significant, and it is likely to have a major impact on various industries in the years to come.

The healthcare sector, in terms of revenue generation and employability, is one of the most significant sectors in India. It includes medical services, infrastructures like hospitals and clinics, medical equipment and its manufacturing units, medical tourism, medical insurance, the manufacture of drugs, and several other provisions that facilitate patient healthcare. It contains several industries of different natures, ranging from research and manufacturing to facilitating management. It is the sector that touches every person in and across the country in one way or the other. Researchers worldwide are indulging in studies investigating the scope of blockchain technology in the healthcare sector and tackling the challenges and problems to make it more efficient and user-friendly (McGhin et al. 2019).

Blockchain technology has the potential to transform the healthcare sector in India. The technology can improve the quality of care, reduce costs, and increase patient trust in the healthcare system.

Blockchain technology may be a front-runner for advancing the healthcare sector of India. However, presently there are certain hurdles in tapping the potential of this technology. There are still challenges that need to be addressed.

This paper thus explores the barriers to the adoption of blockchain technology in the healthcare sector of India.

9.2 Literature Review

Blockchain technology is defined by Sara Saberi et al. as a decentralized, distributed digital ledger technology that records transactions on multiple computers in a secure and transparent way. Each block in the chain contains a cryptographic hash of the previous block, a timestamp, and transaction data, and once added to the chain, it cannot be altered retroactively without changing subsequent blocks. This makes the blockchain technology tamper-proof and ensures the integrity of the data stored in it. Blockchain is best known as the underlying technology behind cryptocurrencies like Bitcoin, but it has many other potential applications in industries such as finance, healthcare, and logistics, among others.

Van Rijmenam and Ryan (2017) discuss how blockchain technology may address economic, environmental, and social concerns in improving your business and our planet.

Although this technology is still in its nascent stage in India, it is rapidly gaining traction. As a result, it's critical to look into India's adoption concerns. However, technology adoption by users is a complex process. Moreover, the accomplishment of technology is determined by the actions of implementers such as the government, clients, and others. Furthermore, a country's socioeconomic and political situations profoundly impact the performance and accomplishment of the technology.

Blockchain is a revolutionary technology that changes system security, robustness, and efficiency. Blockchain is not simply a cryptocurrency base, despite Bitcoin's popularity. It is indeed a safe place to exchange services or money. Rising regulation, cybercrime, and frauds hinder industrial growth. Blockchain enables flexible value chains, rapid product development, better customer relationships, and faster IoT and cloud integration. Blockchain reduces trade costs by providing a reliable contract monitoring mechanism that removes third-party meddling.

While blockchain research has grown considerably in the last few years, there is still much to be discussed regarding its acceptability and role in the existing literature on acceptance of technology. Blockchain technology's capabilities and claimed developments will not transfer to applicability if users do not accept the technology. The acceptability, or lack thereof, of new information systems, is a persistent hindrance to the adoption and dissemination. By moving the attention and authority to the users, blockchain systems strive to decentralize information and transactions. This raises the issue because, by design, the system cannot rely exclusively on the adoption of trusted third parties but must also depend upon the customers it is intended to serve.

According to Boschi, Alexandre et al., blockchain technology helps customer operations gain visibility into the working of blockchain works. That ends up in learning comprehensively about the traceability of the product.

Blockchain will profoundly impact future generations, shaping future developments in education, governance, the healthcare sector, the financial system, agriculture, and more. Don Tapscott further suggested that the scope of blockchain technology is way more than the financial system.

Public, permissioned, and private are the types in which a blockchain can be categorized. A public blockchain is one in which anyone with proof of work can read or publish on the platform. A permissioned blockchain allows only specified blocks to access and ascertain consent on specific transactions, allowing for limited transparency. On the other hand, a private blockchain only allows selected members to join the network.

Blockchain technology can provide significant value to its users.

The healthcare sector of India remains in abysmal and appalling condition. It is lying behind the requirement that the World Health Organization has set up to serve the masses, such as the number of doctors, nurses, and medical technicians. The healthcare market is expected to be around 8.6 trillion by 2022 (Prema et al. 2021).

According to the Economic Survey 2022, public expenditure on healthcare stands at 2.1% of India's total gross domestic product. Hence, the sectors need attention and go hand in hand with the latest technological advancement. Due to budget constraints,

India's health system can be termed inadequate, appalling, and inconsistent (Finance Ministry GOI 2021).

Arvind Kasthuri's challenge to healthcare in India—The five A's has highlighted five significant challenges in the healthcare sector in India. They are lack of awareness, access to healthcare, absence or the crisis of human power, affordability or the cost of healthcare, and the lack of accountability in healthcare (Kasthuri 2018).

It has been observed that scaling up healthcare information systems in primary healthcare is an intricate ambition for three reasons. Firstly, the inimitable difficulty of "all or nothing." It means data of the whole state is needed in a single format using the same logic to compute indicators. Secondly, the political issue arises from a clash of interests among contributors, vendors, politicians, and bureaucrats. Thirdly, the permanent volatility and change in this domain are also a significant concern due to inconsistent political change, uneven reforms in technological demands, and great disparities in public health needs (Sahay and Walsham 2006).

Poor health quality is a global problem. Several industrialized and developing countries have low-quality medical professionals, geographic disparities in healthcare quality, and significant medical error rates (Mohanan et al. 2016).

The COVID-19 pandemic's extensive death and disruption uncovered existing institutions' inadequacies in safeguarding human health and well-being. The scarcity of adequate and timely data and widespread misperception create significant harm and increase tension between data privacy and public health (Khurshid 2020).

Cloud technology and mobile health apparatus have become more common. In the Internet era, the potentiality of malicious intrusions and the compromise of private information have also increased. The sharing of health information and privacy issues associated with such sharing has been increased. It has become more difficult to access such health information through smartphones, making patients travel to many doctors. Hence, the healthcare industry faces several challenges, particularly authentication of the information provided, interoperability of data, privacy concerned with data sharing, the exchange of medical information, and concerns for mobile health (McGhin et al. 2019).

In 2015, the "Digital India" campaign was announced by the Indian government. It intended to bring digital transformation to India through a digitally empowered society and knowledge economy. With the announcement of the Ayushman Bharat Digital Mission and National Tele Mental Health Program in the budget for 2022, the government has made clear intentions toward digitization and technological advancement in the healthcare sector. With digitization in the sector, several concerns and challenges come forth, too, like privacy and cyber threat, high cost, infrastructure, etc. The aims and objectives of digitizing health data are to achieve "health for all." However, it has not yet met its expectations, as data digitization is a colossal and complex task. At the same time, it is inevitable as it forms the foundation of healthcare delivery based on accessibility, affordability, and quality (Ranganathan 2020).

Furthermore, the government initiated the National Digital Health Blueprint Policy to pursue the digitization of India's healthcare sector. The National Digital Health Blueprint (NDHB) is a policy framework designed by the Indian government to accelerate the digitization of the country's healthcare sector. The NDHB

was launched in 2019 by the Ministry of Health and Family Welfare and is a key component of the government's broader Digital India initiative. The NDHB policy aims to establish a digital health infrastructure that will enable the secure and efficient sharing of health data between patients, healthcare providers, and other stakeholders. It seeks to create a National Digital Health Ecosystem (NDHE) that will serve as a centralized platform for healthcare-related data and services.

It offered a comprehensive architectural framework of a "Federated National Health Information System." It was intended to connect primary, secondary, and tertiary healthcare systems within private and public healthcare provider organizations. The policy is an extended version aligned with the National Health Policy of 2017 that aims to formulate and incorporate information systems concerning all healthcare system stakeholders to improve transparency, efficiency, and the citizens' experience (Gudi et al. 2021).

Blockchain technology appears to be a feasible solution. Its qualities of decentralization, immutability, transparency, and traceability can improve the exchange and storage of healthcare information. However, many organizations associated with healthcare are apprehensive of embracing such novel blockchain technology due to several challenges like privacy and security of the data, authorization, interoperability issues, and human resources having technical skills required for the same.

Numerous obstacles to implement blockchain technology in industries and services demand immediate consideration.

Healthcare applications on blockchain technology require a more robust authentication system, interoperability, and information-sharing system due to strict guidelines and rules enumerated in government laws. Some advancements in the field are fraud detection, identity verifications, and smart contracts. Even after all such progress and development in the area, there are challenges, vulnerabilities, and issues that blockchain technology comes with, like mining threats, crucial management systems, and mining incentives (McGhin et al. 2019).

Blockchain is an innovative technology that provides greater accuracy and traceability for the artifacts it is used to create and the domains it supports. Blockchain technology is believed to comprehensively support the healthcare sector, including medications, medical equipment, health records, and the transfer of medical records to patients using unified registers. A large-scale registry of a country's complete health system could help with accountability and detect crucial supply chain improvement spots. It may allow for the fast and exact detection of new human dangers in the form of new viruses and illnesses such as COVID-19, which necessitated swift government response to reduce human losses (Kassab et al. 2021).

Today smart cities and houses frequently breach patients' names, addresses, and ailments, raising the privacy and security of electronic health records. Patients can't access most EHR data due to current security measures. EHR privacy and accessibility are difficult to reconcile. Blockchain technology can be used in healthcare to reconcile EHR privacy and accessibility (Vora et al. 2019).

There is a worldwide shortage of efficient EHR infrastructure (electronic health record). The global healthcare industry currently spends 2.3 trillion dollars, and the cost is rising at around 5.6 percent per year. However, the results of these most

expensive charges are not revolutionary. Within 30 days of discharge, a person (one in five) risks returning to the hospital. When you look at the cost structure of spending, you'll notice that around a quarter of it is deemed waste (Shah et al. 2018).

Electronic healthcare data must be accessible to provide an efficient treatment system, policy choices, and healthcare data/information exchange. Healthcare data is vulnerable to privacy and security breaches due to the non-physical nature of digital data. When a nationwide healthcare and wellness program is envisaged, the significance of immutability and healthcare data security and privacy has become even more critical. Providing high-quality healthcare to a large population is complex and necessitates adequate technological infrastructure. Society's collaboration is also vital in laying such a vast infrastructure for healthcare services to work smoothly (Pandey and Litoriya 2020).

Many suggestions to employ a blockchain have arisen due to the need for a system to securely handle and retain medical records (Di Francesco Maesa and Mori 2020).

Counterfeit medications are a global problem, and every government is now dealing with it. Fraudulent medications are a big problem in India, with around 3% of pharmaceuticals being substandard or counterfeit. In the highly regulated pharmaceutical business, blockchain technology offers the potential to increase transaction transparency, efficiency, and dependability. Manufacturers and other supply chain actors may use blockchain to access real-time data and increase visibility throughout the supply chain, from manufacturing to the point of sale (Ayog 2020).

The blockchain-based model considers data integrity concerns and the development of regulated and codified contracts for data access, offering the healthcare industry a new dimension. When working with electronic health records, which save data in different ways, it's tough to figure out who, what they're doing, and when they're done. Each process has a timestamp and an identity in the blockchain-based paradigm, and copies are distributed to each network point. As a result, any change or update to a node is spread uniformly throughout all nodes and visible to anyone visiting it from anywhere on the Earth (Onik et al. 2019).

As an emerging technology, blockchain is gaining traction, with more applications likely to emerge shortly. Blockchains are being used to overcome challenges in systems vulnerable to assaults because they provide a decentralized and distributed ledger system without the help of any intermediaries or a third trusted party. Researchers have focused on healthcare as one prospective industry that could be benefited from blockchain technology (Shuaib et al. 2019).

Blockchain technology has made significant development in industries like healthcare in recent years. Blockchain is a decentralized digital ledger that enables secure and transparent transactions without the need for intermediaries. The technology's unique features, such as immutability, security, and transparency have made it an ideal solution for healthcare applications.

One of the significant benefits of using blockchain in healthcare is the secure and efficient management of health data. Blockchain can enable patients to have control over their health data and share it securely with healthcare providers. This feature can enhance patient privacy and data security, while also streamlining the data-sharing process. Blockchain can also be used to prevent medical fraud and counterfeiting. The

technology's transparency and immutability make it difficult for bad actors to tamper with medical records or counterfeit medicines. This can improve patient safety and reduce healthcare costs. In addition to these benefits, blockchain can also facilitate supply chain management, clinical trials, and research. By leveraging blockchain's distributed ledger technology, healthcare organizations can track drugs and medical devices through the supply chain, maintain trial records, and securely share research data. Overall, the adoption of blockchain technology in healthcare has the potential to transform the sector by improving data security, enhancing patient privacy, and promoting interoperability among healthcare stakeholders (Alonso et al. 2019).

There are several obstacles to knowledge exchange and dissemination in healthcare. Service providers and patients must use a combination of secure data-sharing technologies to make educated clinical decisions. The digitization of medical records opens new possibilities for researching medical trends and assessing treatment quality. Relevant technologies are still in their infancy, but blockchain has the potential to help the support service in a variety of ways. Simultaneously, electronic documents are isolated in locally centralized data storage, obstructing future progress. The use of blockchain enhances connectivity while simultaneously ensuring security, privacy, and cost savings for all parties involved (Prokofieva and Miah 2019).

The benefits of blockchain adoption, like any other emerging technology in healthcare, come with several drawbacks. Difficulties occur due to the need to preserve thoroughly dispersed patient data, the massive volume of clinical data created, and the forking of blockchains due to consensus changes. Many blockchain applications store patient data and information using a hybrid approach, storing rules and references to data in either a secure, centrally owned system or a private blockchain. This may seem to completely negate the purpose of distribution, as it is only one step away from centralized ownership, yet, its implementation is crucial (Kamel Boulos et al. 2018).

9.3 Research Methodology

Integrating blockchain technology into India's healthcare sector is a daunting task and thus, there are substantial potential barriers that need to be explored. Responses of the experts from academia, IT sector, and healthcare sector were taken to identify the variables under study. The technology–organization–environment (TOE) framework is used. The Fuzzy-DE MATEL approach follows the literature review and expert surveys. Fuzzy set theory reduces subjectivity in expert input.

This paper identifies and ranks 14 critical barriers in three categories: technological, organizational, and environmental. This method evaluates the links between identified constructs.

The TOE framework was used to build the DEMATEL questionnaire to group literature- and expert-verified barriers. The study led to a list of barriers, which are summarized in Table 9.1.

The TOE framework is an effective way to categorize factors affecting the adoption of cutting-edge technologies. The current study identifies the key barriers to adopt blockchain technology as a theoretical contribution. This study adds to the body of literature by offering expert opinions on the subject. The use of the Fuzzy-DEMATEL technique to compare the barriers found in the literature and experts' opinions is another addition to this work.

9.4 The Steps of the Fuzzy-DEMATEL Method

The fuzzy-DEMATEL methodology is a decision-making tool that can help to analyze the causal relationships between various factors in a system. The steps of the fuzzy-DEMATEL methodology are as follows:

1. **Problem definition:** Define the problem or issue to be analyzed, and identify the factors or variables that may be contributing to the problem.
2. **Construction of the initial matrix:** Develop an initial matrix of the variables, which shows the relationships between each variable under study and all the other factors in the system.
3. **Fuzzy transformation:** Transform the initial matrix into a fuzzy matrix, which allows for the inclusion of uncertainty and imprecision in the analysis.
4. **Calculation of the impact and influence matrix:** Calculate the impact and influence matrix, which measures the direct and indirect impact of each factor on all the other factors.
5. **Normalization:** Normalize the impact and influence matrix to ensure that all the values are in the same range and can be compared.
6. **Calculation of the total impact and influence:** Calculate the total impact and influence of each variable under study, which shows the overall contribution of each variable to the system.
7. **Interpretation of the results:** Interpret the results of the analysis to identify the most influential variables and to develop strategies for addressing the problem or issue.

Technological Factors

1: Create the fuzzy direct-relation matrix (Refer to Table 9.2).

The fuzzy scale used is displayed in Table 9.3.

2: Normalize the fuzzy direct-relation matrix (Refer to Table 9.4).

3: Calculate the fuzzy total-relation matrix (Refer to Table 9.5).

4: Crisp values are obtained after defuzzification (Refer to Table 9.6).

5: Set the Threshold Value

Threshold value is 0.308. Matrix T has zeroed out values that are less than 0.308. Table 9.7 displays the significant relations model.

6: Final Output and Create a Causal Relation Diagram

D is the sum of rows and R is the sum of columns.

D and R can be used to calculate $D + R$ and $D - R$.

Table 9.8 demonstrates the outcome.

The following figure displays critical relationships. The horizontal and vertical axes of this model are denoted as $D + R$ and $D - R$, respectively.

Organizational Factors

1: (Refer to Table 9.9).

2: (Refer to Table 9.10).

3: (Refer to Table 9.11).

4: (Refer to Table 9.12).

5: (Refer to Table 9.13).

6: (Refer to Table 9.14).

Environmental Factors

1: (Refer to Table 9.15).

2: (Refer to Table 9.16).

3: (Refer to Table 9.17).

4: (Refer to Table 9.18).

5: (Refer to Table 9.19).

6: (Refer to Table 9.20).

9.5 Conclusion

The adoption of blockchain technology in healthcare has the potential to transform the sector, provided the barriers to its adoption are addressed. The TOE framework is used in this paper to classify the barriers under technological, organizational, and environmental domain.

Each technological factor can be examined using Fig. 9.1 and the tables above.

$(D + R)$ denotes the effect of factor i on the system as a whole as well as the influence of other system components on the factor. In the fuzzy-DEMATEL technique, $(D + R)$ stands for both a factor’s direct and indirect effects on the system as a whole, as well as the impact of other factors on that factor. The R value shows the indirect impact of factor i on the system through other variables, whereas the D value represents the direct impact of factor i on the system. We may find the entire impact of factor i on the system by adding up these numbers.

Compatibility is hierarchically first, and immaturity, complexity, security and privacy concerns, and slow processing speed are next in relation to degree of importance.

In the fuzzy-DEMATEL technique, $(D - R)$ denotes a factor’s level of relative independency (R) and level of dependence (D) from the other factors in the system. It considers both the impact of the factor on the system as a whole and the impact of the factor on other system factors. This helps in identifying the key factors that play a significant role in the system and the ones that are less critical.

A causal variable shows a positive value of $(D - R)$, whereas an effect variable has a negative value of $(D - R)$. In this study, complexity, immaturity is considered causal variable, and compatibility, security, privacy concerns, and slow processing speed is regarded as an effect.

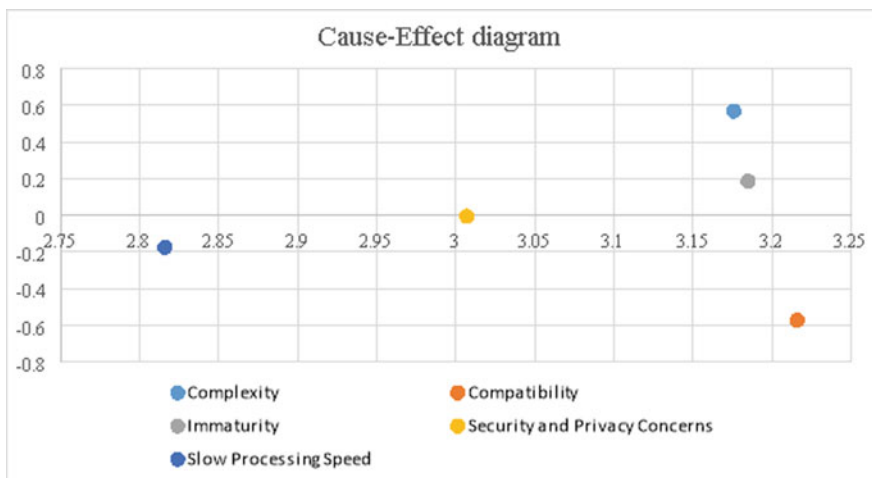


Fig. 9.1 Cause Effect diagram 1

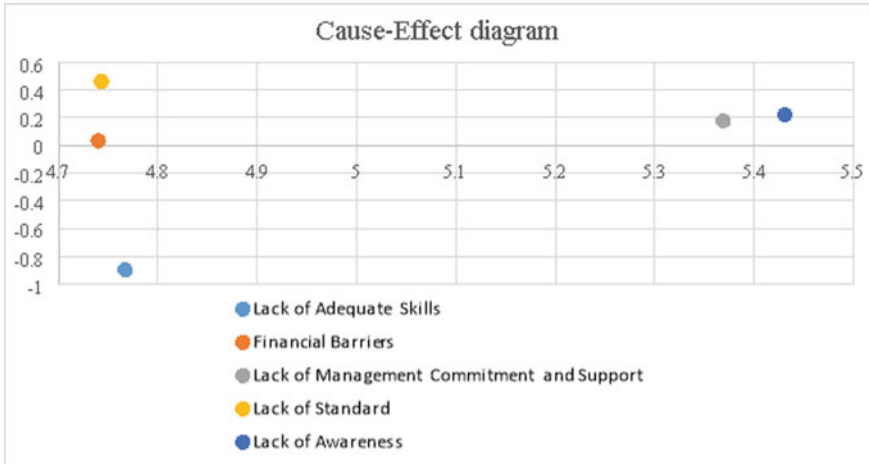


Fig. 9.2 Cause Effect diagram 2

Similarly, according to Fig. 9.2 and the tables above, every organizational factor can be evaluated using following criterias.

Lack of awareness is ranked first, which means it is the most important organizational factor. Lack of management commitment and support is at second priority. Lack of adequate skills and lack of standard and financial barriers are ranked next.

The following are seen as causative variables: financial constraints, a lack of management commitment and support, a lack of standards, and a lack of awareness. Lack of adequate skills is observed as an effect.

Last but not least, according to Fig. 9.3 and the preceding tables, the aforementioned environmental elements can be evaluated based on the following criteria.

Legal issues and lack of regulatory compliance are ranked first. Government incentives are next priority, followed by sustainability concerns. Market and ecosystem readiness is ranked in the following place.

Legal issues and lack of regulatory compliance, market, and ecosystem readiness are viewed as causative factors. Sustainability concerns and government incentives are regarded as an effect.

In conclusion, while blockchain technology in the healthcare sector in India is still in its early stages of adoption, there is growing interest in its potential to improve data security, interoperability, and transparency. With further development and standardization, blockchain technology has the potential to transform the healthcare industry in India, leading to improved patient outcomes and a more efficient healthcare system.

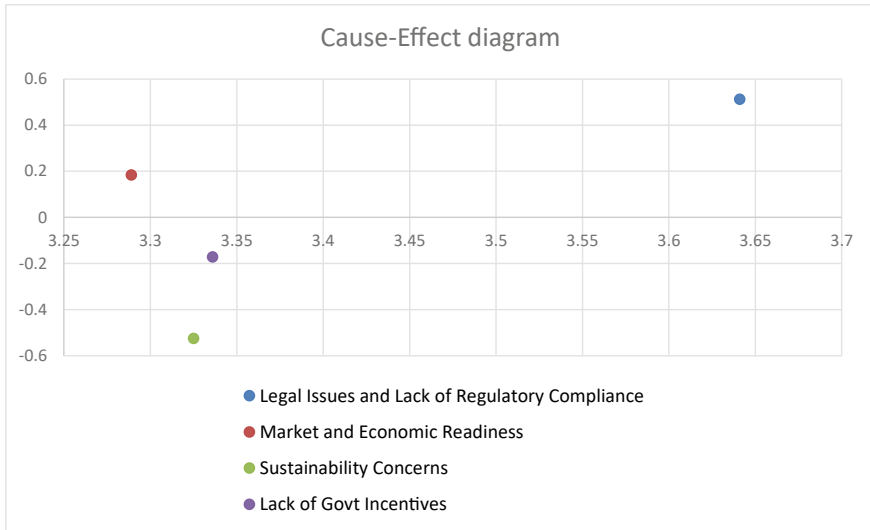


Fig. 9.3 Cause Effect diagram 3

Appendix

See Tables [9.1](#), [9.2](#), [9.3](#), [9.4](#), [9.5](#), [9.6](#), [9.7](#), [9.8](#), [9.9](#), [9.10](#), [9.11](#), [9.12](#), [9.13](#), [9.14](#), [9.15](#), [9.16](#), [9.17](#), [9.18](#), [9.19](#), and [9.20](#).

Table 9.1 Barriers to the implementation of blockchain technology in the healthcare sector

Dimensions	Factors
Technological	Complexity
	Compatibility issues
	Immaturity
	Security issues
	Slow processing speed
Organizational	Lack of adequate skills
	Financial barriers
	Lack of management commitment and support
	Lack of standard
	Lack of awareness
Environmental	Legal issues and lack of regulatory compliance
	Market and economic readiness
	Sustainability concerns
	Lack of govt. incentives

Table 9.2 Direct relation matrix

	Complexity	Compatibility	Immaturity	Security and privacy concerns	Slow processing speed
Complexity	(0.000, 0.000, 0.000)	(0.250, 0.500, 0.750)	(0.250, 0.500, 0.750)	(0.000, 0.250, 0.500)	(0.250, 0.500, 0.750)
Compatibility	(0.000, 0.250, 0.500)	(0.000, 0.000, 0.000)	(0.000, 0.250, 0.500)	(0.000, 0.250, 0.500)	(0.000, 0.250, 0.500)
Immaturity	(0.000, 0.250, 0.500)	(0.250, 0.500, 0.750)	(0.000, 0.000, 0.000)	(0.250, 0.500, 0.750)	(0.000, 0.250, 0.500)
Security and privacy concerns	(0.000, 0.250, 0.500)	(0.250, 0.500, 0.750)	(0.000, 0.250, 0.500)	(0.000, 0.000, 0.000)	(0.000, 0.250, 0.500)
Slow processing speed	(0.000, 0.250, 0.500)	(0.000, 0.250, 0.500)	(0.000, 0.250, 0.500)	(0.000, 0.250, 0.500)	(0.000, 0.000, 0.000)

Table 9.3 Fuzzy scale

Code	Linguistic terms	L	M	U
1	No influence	0	0	0.25
2	Very low influence	0	0.25	0.5
3	Low influence	0.25	0.5	0.75
4	High influence	0.5	0.75	1
5	Very high influence	0.75	1	1

Source Sadeghi-Niaraki (2020)

Table 9.4 Normalized fuzzy direct-relation matrix

	Complexity	Compatibility	Immaturity	Security and privacy concerns	Slow processing speed
Complexity	(0.000, 0.000, 0.000)	(0.091, 0.182, 0.273)	(0.091, 0.182, 0.273)	(0.000, 0.091, 0.182)	(0.091, 0.182, 0.273)
Compatibility	(0.000, 0.091, 0.182)	(0.000, 0.000, 0.000)	(0.000, 0.091, 0.182)	(0.000, 0.091, 0.182)	(0.000, 0.091, 0.182)
Immaturity	(0.000, 0.091, 0.182)	(0.091, 0.182, 0.273)	(0.000, 0.000, 0.000)	(0.091, 0.182, 0.273)	(0.000, 0.091, 0.182)
Security and privacy concerns	(0.000, 0.091, 0.182)	(0.091, 0.182, 0.273)	(0.000, 0.091, 0.182)	(0.000, 0.000, 0.000)	(0.000, 0.091, 0.182)
Slow processing speed	(0.000, 0.091, 0.182)	(0.000, 0.091, 0.182)	(0.000, 0.091, 0.182)	(0.000, 0.091, 0.182)	(0.000, 0.000, 0.000)

Table 9.5 Fuzzy total-relation matrix

	Complexity	Compatibility	Immaturity	Security and privacy concerns	Slow processing speed
Complexity	(0.000, 0.096, 0.877)	(0.100, 0.310, 1.352)	(0.091, 0.270, 1.175)	(0.008, 0.201, 1.121)	(0.091, 0.270, 1.175)
Compatibility	(0.000, 0.141, 0.829)	(0.000, 0.096, 0.877)	(0.000, 0.153, 0.893)	(0.000, 0.154, 0.898)	(0.000, 0.153, 0.893)
Immaturity	(0.000, 0.166, 0.962)	(0.099, 0.293, 1.266)	(0.000, 0.097, 0.882)	(0.091, 0.257, 1.107)	(0.000, 0.180, 1.036)
Security and privacy concerns	(0.000, 0.153, 0.893)	(0.091, 0.270, 1.175)	(0.000, 0.166, 0.962)	(0.000, 0.084, 0.813)	(0.000, 0.166, 0.962)
Slow processing speed	(0.000, 0.141, 0.829)	(0.000, 0.179, 1.031)	(0.000, 0.153, 0.893)	(0.000, 0.154, 0.898)	(0.000, 0.070, 0.739)

Table 9.6 Crisp total-relation matrix

	Complexity	Compatibility	Immaturity	Security and privacy concerns	Slow processing speed
Complexity	0.228	0.473	0.412	0.347	0.412
Compatibility	0.255	0.232	0.278	0.279	0.278
Immaturity	0.292	0.449	0.233	0.391	0.32
Security and privacy concerns	0.273	0.419	0.299	0.211	0.299
Slow processing speed	0.255	0.322	0.278	0.279	0.187

Table 9.7 Crisp total-relationships matrix by taking the threshold value into consideration

	Complexity	Compatibility	Immaturity	Security and privacy concerns	Slow processing speed
Complexity	0	0.473	0.412	0.347	0.412
Compatibility	0	0	0	0	0
Immaturity	0	0.449	0	0.391	0.32
Security and privacy concerns	0	0.419	0	0	0
Slow processing speed	0	0.322	0	0	0

Table 9.8 Final output

	R	D	$D + R$	$D - R$
Complexity	1.304	1.872	3.176	0.568
Compatibility	1.895	1.322	3.216	- 0.573
Immaturity	1.5	1.686	3.185	0.186
Security and privacy concerns	1.506	1.5	3.007	- 0.006
Slow processing speed	1.496	1.321	2.816	- 0.175

Table 9.9 Direct-relation matrix

	Lack of adequate skills	Financial barriers	Lack of management commitment and support	Lack of standard	Lack of awareness
Lack of adequate skills	(0.000, 0.000, 0.000)	(0.000, 0.250, 0.500)	(0.000, 0.250, 0.500)	(0.000, 0.250, 0.500)	(0.250, 0.500, 0.750)
Financial barriers	(0.250, 0.500, 0.750)	(0.000, 0.000, 0.000)	(0.250, 0.500, 0.750)	(0.000, 0.250, 0.500)	(0.250, 0.500, 0.750)
Lack of management commitment and support	(0.500, 0.750, 1.000)	(0.250, 0.500, 0.750)	(0.000, 0.000, 0.000)	(0.250, 0.500, 0.750)	(0.250, 0.500, 0.750)
Lack of standard	(0.250, 0.500, 0.750)	(0.250, 0.500, 0.750)	(0.250, 0.500, 0.750)	(0.000, 0.000, 0.000)	(0.250, 0.500, 0.750)
Lack of awareness	(0.250, 0.500, 0.750)	(0.250, 0.500, 0.750)	(0.500, 0.750, 1.000)	(0.250, 0.500, 0.750)	(0.000, 0.000, 0.000)

Table 9.10 Normalized fuzzy direct-relation matrix

	Lack of adequate skills	Financial barriers	Lack of management commitment and support	Lack of standard	Lack of awareness
Lack of adequate skills	(0.000, 0.000, 0.000)	(0.000, 0.077, 0.154)	(0.000, 0.077, 0.154)	(0.000, 0.077, 0.154)	(0.077, 0.154, 0.231)
Financial barriers	(0.077, 0.154, 0.231)	(0.000, 0.000, 0.000)	(0.077, 0.154, 0.231)	(0.000, 0.077, 0.154)	(0.077, 0.154, 0.231)
Lack of management commitment and support	(0.154, 0.231, 0.308)	(0.077, 0.154, 0.231)	(0.000, 0.000, 0.000)	(0.077, 0.154, 0.231)	(0.077, 0.154, 0.231)
Lack of standard	(0.077, 0.154, 0.231)	(0.077, 0.154, 0.231)	(0.077, 0.154, 0.231)	(0.000, 0.000, 0.000)	(0.077, 0.154, 0.231)
Lack of awareness	(0.077, 0.154, 0.231)	(0.077, 0.154, 0.231)	(0.154, 0.231, 0.308)	(0.077, 0.154, 0.231)	(0.000, 0.000, 0.000)

Table 9.11 Fuzzy total-relation matrix

	Lack of adequate skills	Financial barriers	Lack of management commitment and support	Lack of standard	Lack of awareness
Lack of adequate skills	(0.009, 0.143, 1.315)	(0.008, 0.187, 1.273)	(0.013, 0.204, 1.362)	(0.007, 0.174, 1.193)	(0.080, 0.263, 1.418)
Financial barriers	(0.101, 0.326, 1.736)	(0.016, 0.151, 1.338)	(0.094, 0.305, 1.628)	(0.014, 0.208, 1.380)	(0.094, 0.306, 1.634)
Lack of management commitment and support	(0.181, 0.426, 1.996)	(0.094, 0.317, 1.707)	(0.030, 0.207, 1.634)	(0.088, 0.296, 1.600)	(0.107, 0.346, 1.832)
Lack of standard	(0.109, 0.350, 1.852)	(0.094, 0.305, 1.627)	(0.101, 0.327, 1.736)	(0.016, 0.151, 1.338)	(0.101, 0.328, 1.743)
Lack of awareness	(0.122, 0.378, 1.976)	(0.100, 0.326, 1.734)	(0.175, 0.407, 1.901)	(0.093, 0.304, 1.626)	(0.038, 0.218, 1.670)

Table 9.12 Crisp total-relation matrix

	Lack of adequate skills	Financial barriers	Lack of management commitment and support	Lack of standard	Lack of awareness
Lack of adequate skills	0.348	0.374	0.404	0.35	0.461
Financial barriers	0.564	0.358	0.529	0.406	0.529
Lack of management commitment and support	0.681	0.544	0.452	0.509	0.587
Lack of standard	0.599	0.524	0.562	0.356	0.562
Lack of awareness	0.639	0.555	0.65	0.519	0.464

Table 9.13 Crisp total-relationships matrix by considering the threshold value

	Lack of adequate skills	Financial barriers	Lack of management commitment and support	Lack of standard	Lack of awareness
Lack of adequate skills	0	0	0	0	0
Financial barriers	0.564	0	0.529	0	0.529
Lack of management commitment and support	0.681	0.544	0	0.509	0.587
Lack of standard	0.599	0.524	0.562	0	0.562
Lack of awareness	0.639	0.555	0.65	0.519	0

Table 9.14 Final output

	<i>R</i>	<i>D</i>	<i>D + R</i>	<i>D – R</i>
Lack of adequate skills	2.831	1.936	4.767	– 0.895
Financial barriers	2.354	2.386	4.74	0.032
Lack of management commitment and support	2.596	2.774	5.369	0.178
Lack of standard	2.14	2.603	4.743	0.463
Lack of awareness	2.604	2.827	5.431	0.222

Table 9.15 Direct-relation matrix

	Legal issues and lack of regulatory compliance	Market and economic readiness	Sustainability concerns	Lack of govt. incentives
Legal issues and lack of regulatory compliance	(0.000, 0.000, 0.000)	(0.500, 0.750, 1.000)	(0.500, 0.750, 1.000)	(0.500, 0.750, 1.000)
Market and economic readiness	(0.250, 0.500, 0.750)	(0.000, 0.000, 0.000)	(0.500, 0.750, 1.000)	(0.250, 0.500, 0.750)
Sustainability concerns	(0.250, 0.500, 0.750)	(0.000, 0.250, 0.500)	(0.000, 0.000, 0.000)	(0.250, 0.500, 0.750)
Lack of govt. incentives	(0.250, 0.500, 0.750)	(0.250, 0.500, 0.750)	(0.250, 0.500, 0.750)	(0.000, 0.000, 0.000)

Table 9.16 Normalized fuzzy direct-relation matrix

	Legal issues and lack of regulatory compliance	The market and ecosystem readiness	Sustainability concerns	Government incentives
Legal issues and lack of regulatory compliance	(0.000, 0.000, 0.000)	(0.167, 0.250, 0.333)	(0.167, 0.250, 0.333)	(0.167, 0.250, 0.333)
The market and ecosystem readiness	(0.083, 0.167, 0.250)	(0.000, 0.000, 0.000)	(0.167, 0.250, 0.333)	(0.083, 0.167, 0.250)
Sustainability concerns	(0.083, 0.167, 0.250)	(0.000, 0.083, 0.167)	(0.000, 0.000, 0.000)	(0.083, 0.167, 0.250)
Government incentives	(0.083, 0.167, 0.250)	(0.083, 0.167, 0.250)	(0.083, 0.167, 0.250)	(0.000, 0.000, 0.000)

Table 9.17 Fuzzy total-relation matrix

	Legal issues and lack of regulatory compliance	The market and ecosystem readiness	Sustainability concerns	Government incentives
Legal issues and lack of regulatory compliance	(0.052, 0.229, 0.985)	(0.193, 0.425, 1.224)	(0.225, 0.490, 1.399)	(0.210, 0.460, 1.318)
The market and ecosystem readiness	(0.113, 0.327, 1.050)	(0.029, 0.176, 0.837)	(0.200, 0.434, 1.242)	(0.121, 0.350, 1.120)
Sustainability concerns	(0.096, 0.283, 0.918)	(0.025, 0.219, 0.857)	(0.029, 0.176, 0.837)	(0.104, 0.303, 0.980)
Government incentives	(0.105, 0.306, 0.988)	(0.104, 0.303, 0.980)	(0.121, 0.350, 1.120)	(0.036, 0.186, 0.854)

Table 9.18 Crisp total-relation matrix

	Legal issues and lack of regulatory compliance	The market and ecosystem readiness	Sustainability concerns	Government incentives
Legal issues and lack of regulatory compliance	0.349	0.535	0.615	0.578
The market and ecosystem readiness	0.429	0.288	0.553	0.467
Sustainability concerns	0.38	0.322	0.288	0.41
Government incentives	0.407	0.408	0.469	0.299

Table 9.19 Crisp total-relationships matrix by considering the threshold value

	Legal issues and lack of regulatory compliance	The market and ecosystem readiness	Sustainability concerns	Government incentives
Legal issues and lack of regulatory compliance	0	0.535	0.615	0.578
The market and ecosystem readiness	0.429	0	0.553	0.467
Sustainability concerns	0	0	0	0
Government incentives	0	0	0.469	0

Table 9.20 Final output

	R	D	$D + R$	$D - R$
Legal issues and lack of regulatory compliance	1.564	2.076	3.641	0.512
The market and ecosystem readiness	1.553	1.737	3.289	0.184
Sustainability concerns	1.925	1.4	3.325	- 0.525
Government incentives	1.754	1.582	3.336	- 0.172

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Chapter 10

Building Agility in Indian Public Sector Banks (PSBs)



Raj Mohan

10.1 Introduction

The global health crisis caused by COVID-19 is the most significant international event since WWII. A more interconnected world has health, economic, and financial implications, as seen by the scope and scale of the global epidemic. The 2007 worldwide financial crisis prompted increased cooperation on a national and regional level, as well as increased sharing of data across national and international bodies. The unexpected and temporary monetary problems brought on by the epidemic were quickly and effectively remedied, thanks to the cooperation of regulators and central banks from several countries. Banking industry stability and reduced economic damage from the pandemic have been assisted by national government attempts to assist firms and individuals through fiscal and monetary policies in a number of nations. Industry's ability to proactively adapt to the social and economic problems posed by the COVID-19 epidemic benefited greatly from this increased resilience. Although the global economy has recovered from the destruction wrought by the COVID-19 epidemic, the uptick in economic activity has been unequal. Concerns centre on the escalating cost of crude oil, rising inflationary pressures, and the lack of clarity surrounding international policies. After the second wave died down, the United States started seeing an increase in the number of people responding to high-frequency action signals. Although banks and other financial institutions have substantial liquidity and capital reserves, and financial statement stress is moderate despite the pandemic, banks still need to reinforce buffers, strengthen accountability, and remain vigilant in the face of global spillovers, as well as monitor their MSME and retail credit portfolios closely.

Even though the second wave in India was unprecedented in its severity, there were indications that it was waning in many regions of the country, especially in the

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major cities. Supply circumstances in agriculture, organised industry, and contact services showed resilience and flexibility to pandemic operations, despite the damage to aggregate demand having hindered economic expansion, notably in April and May 2021. Recovery in exports followed a similar pattern, thanks to the uptick in global trade, but international oil price increases were the leading cause of trade deficits. Inflation numbers are increasingly reflecting cost push pressures, although sluggish demand preventing a fuller pass through.

With some banks looking for additional capital on the market and public sector banks obtaining budgetary recapitalisation, the pre-pandemic capital and liquidity buffers of the banking system have offered resilience. This protective safeguard has improved banks' financial performance and profitability. The sources of income for banks might vary greatly. Some concentrate on commercial lending, others on consumer lending, and yet others on fee-earning operations. However, most banks are increasingly expanding into fee-earning operations. Diversity across multiple sources of income is encouraged since it is thought that diversification reduces risk. Whether or not this is true depends on how independent the various sources of income are of one another. In the face of diminishing net interest margins, depository institutions have moved away from traditional lending and towards sectors that produce non-interest earnings during the last two decades. The reform is critical for financial stability. The more volatile a bank's profit stream, the riskier the firm. The common knowledge in the banking business is that profits from fee-based goods are more stable than earnings from loan fee-based activities, and that diversification reduces bank risk. In comparison with the rest of the globe, the Indian banking industry is focused on operations that create fee income, service charges, trading revenue, and other sorts of non-interest income in addition to conventional sources of revenue such as loan making. Non-interest income now accounts for a significant portion of banking earnings in the developing nations.

There is a perceived decrease in bank risk, which is mostly due to the adoption of loan growth limitations, reserve requirements, and dynamic provisioning. This will raise the share prices of banks during the studied time. Alternative bank share price indications indicate that it is likely to be driven by profit and efficiency concerns. The impact of the pandemic on PSU Indian banks' lending and profitability is an interesting topic to discuss, as it has been seen that PSU banks performed better during the epidemic. The severity of the pandemic will depend on a number of factors, including the bank's financial situation, the structure of the market, the regulatory and institutional climate, the maturity of financial intermediaries and debt markets, the ease with which corporate enterprises can obtain loan capital, and the response of the public health sector.

Findings will be supported further by qualitative study of 167 TMT members from affiliated institutions (PSU Banks), as well as factual data from bank websites and annual reports.

10.2 Literature Review

The study adds to the body of knowledge about the COVID-19 shock's rapidly expanding effects on the corporate sector, specifically the financial sector, PSUs, and management efficiency in relation to the actual economy. Increased risk averse and uncertainty were the results of widespread fear, anxiety, and doubt brought on by high sickness frequency and severity. In this study, we look at bank behaviour overall during pandemic risk occurrences. As a result, we add to the expanding body of research on the implications of the COVID-19 shock on the banking industry and the rise in operational efficiency of Indian PSU banks.

Gupta and Panagariya contend that public sector bank employees are inefficient. To assess this claim, the research applies the cost minimisation of DEA framework. Examination of deposit, loan, investment, non-interest, employee, and asset data revealed that PSU banks were more efficient with their labour resources than private banks. However, public sector banks have shown superior efficiency in monetary policy transmission, which helps monetary policy actions gain traction. There was a much larger drop in lending rates for these institutions than for commercial banks during the last easing cycle. Their deposit rates were likewise considerably higher when compared with those of private banks.

According to a recent research, in the early weeks of the outbreak, the demand for US bank loans saw an initial, sizable positive shock (e.g., Li et al., Chodorow-Reich et al., Greenwald et al.). Businesses boosted their cash reserves and decreased their bank credit limits as a result of the rise in uncertainty and risk. The kind of bank credit and borrower heterogeneity have a significant impact on the findings reached from these studies. Li et al., Chodorow-Reich et al., and Greenwald et al. (2020) used supervisory data from a subset of commercial and industrial loans to find considerable heterogeneities across loan types and corporate borrowers in the first two quarters of the pandemic in the US, with disparities growing with time. Initially, banks were able to meet the increased demand for liquidity caused by the Coronavirus pandemic because of cash infusions from liquidity injection programmes and depositors, as well as strong pre-shock levels of bank capital. In contrast, new loans to large borrowers plummeted during the Global Financial Crisis (e.g., Ivashina and Scharfstein). Banks throughout the world are tightening their lending standards, according to data, because of concerns about macroeconomic outlooks, falling industry challenges, declining risk tolerance, and other factors.

We find that overall loans for US banks fell in the first quarter of the crisis, which is consistent with the findings of Acharya and Steffen; Li et al. We supplement their findings by demonstrating that, while worldwide loan growth slowed on average during the first three quarters of the epidemic, Indian banks performed spectacularly well.

10.3 Theoretical Background: Complementarity and Efficiency

10.3.1 Complementarity

There has been a growing interest in the notion of complementarity and its significance in organisational design in recent years. Complementarity arises in its most known and elemental form where we can find two activities which may be similar or dissimilar reinforcing one other such that doing more of one thing improves the value of doing more of the other thing. However, complementarities might have negative consequences. Complementarities among the parts of closely connected systems, for example, may create obstacles to organisational change since changing one element of the system requires and affects changing many or all of the other aspects of the system (Table 10.1). Furthermore, complementarities across innovation activities (in-house R&D, external sourcing, product innovation, and process innovation) represent the many origins, modalities, and consequences of enterprises' creative strategies. At the elemental level of micro-foundations, synergy is defined as "the interaction of two or more agents or forces so that their combined effect is greater than the sum of their individual effects" or "cooperative interaction among groups, particularly among acquired subsidiaries or merged parts of a corporation, that creates an enhanced combined effect" at the organisational level. "Complementarity," as we use it, is a near synonym for "synergy," but it differs in that it is situated in a decision-making framework and defined mathematically also. When grouping operations inside a system gives more value than performing tasks independently, complementarities exist. In commercial banking, for example, deposit activity is a significant source of money that supplements the banks' lending activity. Banks that did not have access to such cash fared poorly during the current liquidity crisis.

It can be argued that Indian PSU banks have managed to have a better complementarity among its different parts (product, process, and at the organisational level) during the COVID-19 pandemic impact to buffer the negative consequences and garner better profitability.

Complementarities can be further explored at the different elemental level in a banking organisation—organisational practises, decision-making, and organisational dynamics. The notion of complementarity is crucial to organisational analysis because it provides a framework for understanding organisational practise patterns, how they align with specific business objectives, and the reasons why various firms

Table 10.1 Barriers to organisational change (level: from high, moderate to low)

Coupling	Complementarity among elements	
	High	Low
Tightly coupled	Strong barrier	Strong to moderate barrier
Loosely coupled	+ve org change (synergy)	Neutral org change

choose for certain patterns and tactics. The interactions between pairs of related decisions are the foundation of the formal analysis of complementarity. Consider a PSU banking company that is considering if to embrace a strategy, which calls for regular updates to its technology, to invest in a staff that is adaptable in their training, or to give employees more control over how their work is organised. It is the workers who know better what to do and how to solve problems, we may believe that employees who are more flexibly trained can utilise discretion more effectively and that employees who are more independent and flexibly trained make it easier to incorporate new technology. We can also find complementarity between many pairs of decisions, as it is quite normal in a complementarity system. Complementarities theory states that these activities will often cluster. We can further propose that the PSU banks had better use of the complementarity among its products, process, and at the organisational level (decision-making) during the pandemic.

10.3.2 Banking Efficiency

Shephard's book illustrates how the concepts of efficiency, first proposed by Edgeworth and Pareto, were really implemented in the real world (1953). For economic purposes, efficiency is measured by the ratio of final product to total resources used throughout development. Drucker defines efficiency as "the capacity of an organisation to produce its outcome with the minimum amount of input" (1963). Efficient performance, then, is that which results in the fewest resources being wasted (time, energy, and expertise). Efficiency and effectiveness are both terms used to characterise an entity's performance, but efficiency, as defined by Jouadi and Zorgui, encompasses the idea of producing in the most effective way possible. This indicates that the greatest way to maximise efficiency is to make the most out of as little resources as possible, or to use those resources as effectively as possible to create the highest quality goods at the lowest possible cost. Effective management can be defined as the process of discovering how to make the most of a company's existing assets. The effectiveness concept, on the other hand, describes the outcome of components and the achievement of a goal without considering the strategy and optimal use of resources.

In the banking industry, Isrova noted that efficiency promotes the effectiveness of adopted macroeconomic policies, which result in long-term development, economic growth, and societal welfare. This is the same definition given by McKnley and Banaian, who define efficiency in terms of cost reduction and profit maximisation. Researchers disagree on how to define a bank's efficiency. Choosing the banking methods employed is a prerequisite to defining bank efficiency. In the literature on banking theory, two basic methods stand out: the production approach and the intermediation approach, as described by Sealey and Lindley. According to proponents of the production model, banks should fulfil the role of "producers" for their customers by processing loan applications and handling deposits. According to the intermediation theory, banks' principal function is that of financial intermediaries, whose

job it is to collect deposits from people in exchange for the promise that they will lend those monies to others for the purpose of making a profit. It is assumed in the asset approach, also called the intermediation model that financial institutions will mediate between savers and borrowers. The traditional view of banks is that they purchase labour, commodities, and deposits in order to produce lending as their end products. Berger and Humphrey contend that both of these approaches are inadequate because they do not fully take into consideration the dual role of financial institutions both as financial intermediaries and providers of exchange processing services. They point out that while the production strategy could be marginally more appropriate for assessing the effectiveness of bank branches, the intermediation technique might be more appropriate for assessing banking firms as a whole.

According to Diallo, efficiency makes banks more shock-resistant, favourably and considerably impacting growth. During the crisis, bank efficiency reduces credit restrictions and accelerates the expansion of financially reliant companies. The argument that the development of the financial sector is essential to economic growth and that the efficiency of the financial sector may have an impact on a country's long-term growth performance is supported quantitatively by Waheed and Younus. They offer an additional approach to group banking effectiveness into the five categories: first, pure technical efficiency, or how well a certain set of inputs are employed to generate a result. The technical efficiency of a bank can be defined as the ratio of the actual input and output variables to the theoretical maximums and minimums. An inefficient bank, on the other hand, can go to zero, while the maximum possible value for a successful one is one. Second, scale efficiency, which is the bank's capacity to carry out activities at their best. When it works inside the range of constant returns to scale, the bank exhibits scale efficiency (CRS). The third metric is allocative efficiency, which assesses a bank's ability to select the ideal combination of inputs at the given input costs. The fourth consideration is a bank's ability to provide services without wasting money on inefficient technology or misallocation. Last but not least, the institution's capacity to perform well in a wide range of geographic settings.

Because of the controversy that the structural approach caused about the precise nature of the banks' production, Berger and Humphrey outline one of the standard methods for defining banks' output in terms of asset approach, which is as follows: Using the asset approach, banks define their output by serving as financial intermediaries between the holders of liabilities and the recipients of bank funds. As a result, deposits and liabilities are the inputs to the banking process, while loans and other assets constitute the output of the bank. This is the standard efficiency metric that was employed in the article to assess the performance of PSU banks.

10.4 Methodology

The first stage has used the quantitative data capture from PSUs banks annual report in India for measuring efficiency. In the second stage, we will use the qualitative interview data of the 167 TMT members of the PSU banks to triangulate the data and provide rigour to the method.

10.4.1 Quantitative Data Study

India's top public sector banks (PSBs) by loan books and market capitalisation is chosen (Table 10.2).

10.4.2 Efficiency of PSBs: Bank Specific Factors and Their Profitability

We have calculated the PSU banks data corresponding to nine different income statement variables from five PSU banks, State Bank of India, Canara Bank, Bank of Baroda, Indian Bank and Punjab National Bank to gauge their profitability and other measures in last two years corresponding the COVID-19 period. The variables measurements are as below. (PSU bank datasheet and financial performance: Appendix 1).

Interest Income: It is the revenue received from investments like savings accounts and certificates of deposit. Net interest income for financial institutions is defined as revenue less costs.

Interest Expenses: An entity's cost for borrowing money is the interest expense which is the non-operating item that appears on the income statement.

Net Interest Income: Difference between the money a bank receives from its lending activities and the interest which it must pay to depositors is the net interest income.

Operating expenses: Operating costs are costs that a company incurs because of its regular business activities.

Table 10.2 List of PSBs chosen

S. No	Public sector banks
1	State Bank of India
2	Canara Bank
3	Bank of Baroda
4	Indian Bank
5	Punjab National Bank

Net Income after operating expenses—Operating income is revenue less in any operating expenses provisions and contingencies (including taxes). A provision liability lowers the value of an asset due to a current obligation resulting from a previous event. A possible responsibility that could materialise in the future because of unforeseeable circumstances is known as a contingent liability.

Non-interest Income: Bank and creditor income that is predominantly obtained from fees like deposit and transaction fees is referred to as non-interest income.

Profit after Tax: After paying off all a company's running and non-operating expenditures, other liabilities, and taxes, the amount left over is referred to as profit after tax.

Total Assets: A person's or organisation's total assets are all their possessions.

10.5 Findings

Despite ongoing criticism of their fragile balance sheets, PSBs have fared well throughout the COVID-19 epidemic. According to findings from the RBI research, recent massive mergers of PSBs have led to sector consolidation and the creation of stronger, more resilient, and more competitive banks. According to the study, public sector banks (PSBs) have superior labour cost efficiency than private banks. Additionally, empirical data suggests that PSB lending is less procyclical than private bank lending. Thus, PSBs aid in the implementation of countercyclical policies. The formation of the National Asset Reconstruction Company (NARCL), sometimes known as the "bad bank," would aid the state-run banks in eradicating the bad loans legacy from their balance sheets as they have increased market trust in recent years. A different source of infrastructure funding will be made available by the recently established National Bank for Financing Infrastructure and Development (NABFiD), allaying PSBs' worries about asset liability mismatch. Overall, these changes will probably contribute to further strengthening the PSBs. PSU banks benefited from the epidemic through its CASA as well. Savings accounts contain 59 lakh crore. These accounts typically pay 3.5–4% interest. Given that banks receive at least 5% in rev-repo, a 1% difference translates to Rs. 59,000 crore more in "free" money. Just to give you a hint: Banks have current accounts of \$17 lakh crore in which they pay NO interest. For banks, that equates to an annual income of about 85,000 crores (at the 5% RBI grants them), which represents a tidy profit over the course of the year.

The government's Jan Dhan (people's money) project has helped millions of people who had never had access to banking services become part of the financial mainstream. About 280 million similar accounts have been registered as of March 2017, providing users with access to remittances, credit, healthcare, and other financial services, as well as government incentives. RuPay is a domestic alternative to international credit- or debit-card gateways like MasterCard and Visa; the Unified Payment Interface (UPI) is a system that makes it easier to transfer money between bank accounts on mobile platforms; and the Bharat Interface for Money (BHIM) is a mobile app based on UPI. These are just a few of the low-cost Indian platforms that

have been introduced to promote digital payments. These changes provide financial players the chance to create cutting-edge business models that will serve millions of new customers. Innovative incumbents and new entrants both benefit from cheaper infrastructure costs and the absence of legacy difficulties, when it comes to reaching and serving customers. In comparison with new participants, many current banks have greater balance sheets, giving them an edge and stronger leverage throughout the effect of COVID-19. Financial service providers are now able to serve their clients more intelligently, thanks to Aadhaar's ability to identify specific customers. This allows for quicker approvals, more specialised products, and better underwriting decisions, all of which benefit PSU banks' efficiency when compared with other private players.

Emerging technologies will be crucial in post-epidemic and economic crises for accelerating transactions and cutting costs for banks. The Indian banking industry is already aware of how important technology is for obtaining growth and access. These technologies will be crucial to the digital transformation of banks and other financial institutions. They will reimagine how services are delivered digitally, and they will support PSU banks during the current economic crisis by enabling them to deliver services more effectively to their customers.

10.6 Discussions

August 2022 RBI circular explains why the country's public sector banks are so important. Their high-quality credit system and other factors contribute much to the growth of financial access for all. This suggests that public sector banks are frequently more efficient than their private sector counterparts. Public sector banks are vital to the economies of India's rural and semi-urban areas, but the research alleges that private sector banks have failed their customers there. The RBI article supports the function performed by public sector banks with research from certain well-known economists. In many instances, the social advantages of state-owned firms outweigh the social costs since they were established to solve market failures. In developing economies, the state-owned banks provide macroeconomic stability. Studies that assist the green transition in several nations point out the importance that PSU banks play in promoting investments in low-carbon businesses. According to the report by the Reserve Bank of India (RBI), public sector banks have a more significant role in boosting societal well-being than their private sector counterparts. Private banks take on more risk with their loans since they are more prone to ride out economic cycles than their public sector rivals. Further, when the sole objective is to maximise profits, PVBs have consistently outperformed their public sector rivals in terms of efficiency. Total branches, agriculture advancements, and PSL advances are all measures of financial inclusion, and when this metric is added to the original aim function, PSBs beat PVBs. Employees at the PSB have a reputation for being inefficient (Gupta and Panagariya 2022).

Banking CEOs are faced with the dual problem of driving up staff morale while decreasing personnel expenses in the present difficult interest rate environment. They have to do this while still meeting the pressing need to embrace cutting-edge technological advancements. And they have to do it all in a context, where financial institutions have to think about the long-term repercussions of their decisions on workers' ability to acquire new skills. A challenging task, but one that many banks have successfully completed by establishing leaner, less hierarchical cultures. We observe successful banks use a variety of tried-and-true levers in a way that empowers staff, simplifies structures, and speeds up decision-making while simultaneously lowering costs. Efficiency and efficacy may coexist when PSU banks use their established reputation and substantial asset base to penetrate rural areas.

No successful firm can afford to make decisions slowly as the speed of data and technological advancement quickens. Such operations may be made more efficient and successful with the use of technology. Four things successful PSU banks do. They start honing their abilities in preparation for the next day's work. Building a clear, data-rich knowledge of the new blend of skills and abilities they'll need is the first step in developing a strategic workforce strategy. It's possible that a combination of retraining, upskilling, hiring, and talent leasing will be necessary. Second, they help people make better decisions more quickly. Assuring this is in place is probably the single most important factor in ensuring the success of any organisation. Some PSU banks go even farther, coming to the conclusion that switching to a completely agile operating model is the ideal option to pursue efficiency and effectiveness combined. In order to do this, a number of high-performing, dynamic tribes and squads must be established, each of which must "own" a specific purpose or customer and business objective and possess the end-to-end resources, competencies, and responsibility to carry it out.

10.7 Conclusions

Public sector banks naturally meet their priority sector lending objectives, while most commercial banks invest in priority sector lending certificates (PSLCs), notably when lending to agriculture and small and marginal farmers. Private sector participants would rather pay more to fulfil their lending goals than gain experience in such specialised lending. Regarding asset quality, banks like HDFC, ICICI, Axis, and many international banks have exposure to reputable businesses with sound financials. These businesses have enough cash on hand to last for a few more months. They won't default as a result. However, banks like Yes Bank, IndusInd Bank, and RBL Bank have exposure to consumers with poor credit ratings who would stop making payments on their loans if this continued for a long time. Therefore, the banks would need to inject more capital to sustain CAR as the average gross NPA ratio in the Indian banking sector is predicted to increase to 10.5% from the existing 7–8% level. Second, on the liquidity front, customers began withdrawing money from banks that are comparable following the recent Yes Bank catastrophe, which

caused these institutions to have very low deposits. This issue is present in IndusInd. People won't worry as much about the high interest rates these banks give as they will about the safety of their money, where the PSUs are able to gain from CASA throughout the uncertain period. As a result, these banks will struggle to maintain deposits.

Future PSU bank plans that have previously emphasised customer profiles should stop concentrating on lending. They ought to consider early termination and liquidation of mortgages held by clients that they believe won't pay or if they have begun defaulting, as may be the case. They can strengthen WFH's capacities so that work can go on in the face of difficulty. Banks may now concentrate on financing to businesses in the pharma and vital services sectors, among others, as these businesses are expected to do well in FY21–22. Banks require a different word (which is already gaining popularity) called Covid-adjusted EBITDA to describe the true state of the economy once the impacts of the Corona have been eliminated and create partnership-driven digital ecosystems to take advantage of the biggest potential in Indian banking over the next three to five years. This tactic will necessitate that banks become ubiquitous in their clients' lives to fulfil their monetary requirements. By letting customers to make deposits and withdrawals at local merchants, a payments bank, for instance, can spare them the expense of maintaining traditional bank branches and automated teller machines. To implement this strategy, PSU banks need to establish tight working ties with their partners and develop integrated digital infrastructures.

Government-sponsored banks (GSBs) could profit from the rising demand for loans from SMBs. While corporate loan books are decreasing, India's vast number of small and medium-sized businesses presents the next development potential (SMEs). Currently, the majority of them rely on nonbank financial institutions and the unorganised sector for their funding requirements. An estimated 50 million SMEs will enter the formal banking sector as a result of the informal to formal economy shift by 2023–2024.

10.8 Implications for Organisations

Although complementarities in organisations have significant practical implications for managers and others who train or advise them, they may also be thoroughly analysed using theory and statistics. For example, complementarities' concepts and methods may be used to decisions about organisational strategy, change management, mergers and acquisitions, competitive strategy, and leadership and culture. By erecting long-lasting entry barriers and associated rents, complementary relationships can also have an impact on competitive strategy. Best practises can be challenging to replicate if they depend on a complex web of connections with other practices. This offers the idea of "core competency" economic substance and rigour, as Milgrom and Roberts note where PSU can leverage their capabilities.

Ironically, businesses that are successful at developing tightly connected systems of highly complimentary practices may have the most trouble adopting new combinations of practices when external reasons demand for a change, as highlighted by Roberts. Risks in mergers and acquisitions are therefore also posed by complementary organisational practices. The true worth of many, if not most firms, is found in their organisational capital rather than their physical assets. However, this organisational capital may be brittle; after blending with various practices through a merger or acquisition, methods that were successful in one environment could no longer be so. This management task might become less complex and easier to do by comprehending the role of complementarities in companies. Thus, PSU banks can be better while enhancing their internal capability instead of going blindfolded to mergers. They can look for the joint ventures which is an alternative to acquisitions and where better complementarity is an easier way to find.

Appendix 1: Financial Data for Five Public Sector Banks (PSBs) in India

PSU bank data sheet	State Bank of India			Canara Bank			Bank of Baroda		
	Q1FY2023	FY2022	FY2021	Q1FY2023	FY2022	FY2021	Q1FY2023	FY2022	FY2021
Interest income	72,676.00	2,75,457.29	2,65,150.63	18,176.64	69,410.23	69,280.46		69,880.78	70,495.06
Interest expenses	41,480.00	1,54,749.70	1,54,440.63	11,391.91	43,026.26	45,177.62		37,259.44	41,686.03
Net Interest	31,196.00	1,20,707.59	1,10,710.00	6784.73	26,383.97	24,102.84		32,621.34	28,809.03
Operating expenses		93,397.51	82,652.22	5353.82	19,791.90	19,338.18		21,716.43	20,543.65
Net income after operating expenses	12,753.00	2,22,623.69	2,25,994.78	17,998.14	66,115.24	64,866.59		59,648.30	62,885.38
Provisions and contingencies (incl. tax)		36,198.00	51,143.68	3690.05	17,410.56	17,131.38		15,116.56	20,370.38
Non-interest income		40,563.91	43,496.37	5175.32	16,496.90	14,924.31		11,483.95	12,933.96
Profit after tax	6068.00	28,075.13	9912.16	2022.03	5678.41	2557.57		7272.28	828.95
Total Assets		49,87,597.00	45,34,430.00	12,98,963.96	12,26,979.67	11,53,675.03		12,77,999.83	11,55,364.77
PSU bank data sheet	Indian Bank			Punjab National Bank					
	Q1FY2023	FY2022	FY2021	Q1FY2023	FY2022	FY2021	Q1FY2023	FY2022	FY2021
Interest income	4434.74	16,729.83	16,965.53	18,757.04	74,879.53	80,818.40			
Interest expenses	2680.99	10,418.72	11,067.02	11,214.20	46,185.07	50,272.79			
Net Interest	1753.75	6311.11	5898.51	7542.84	28,694.46	30,545.61			
Operating expenses	1320.84	5451.24	5561.72	4700.62	20,252.59	20,308.74			
Net income after operating expenses	3707.36	16,181.64	16,962.83	16,593.41	66,946.90	72,431.97			
Provisions and contingencies (incl. tax)	630.40	4053.37	5064.33	4790.19	17,304.85	20,137.56			
Non-interest income	593.46	4903.01	5559.01	2536.99	12,319.95	11,922.31			
Profit after tax	392.17	- 17,104.31	- 18,145.65	308.44	3456.96	2021.61			
Total Assets		2,95,968.76	2,99,377.16	13,21,076.20	13,14,805.02	12,60,632.61			

Appendix 2: Additional Data for Study in Understanding Public Sector Banks Performance

Variables, which can be used in the future study and their expected effect on bank performance

	Variable	Measurement
S. No	Indicators of profitability	
1	Return on assets	Net income/total assets
2	Return on equity	Net income/shareholder's equity
S. No	Bank specific characteristics (internals factors)	
1	Size of bank	Total assets natural logarithm
2	Ownership of bank	Dummy variables Govt-1, others-0
3	ECTA	Equity/total assets of shareholder's
4	Operational efficiency	Operating expenses/total assets
5	Risk of credit	Loan loss provisions/total loans
6	NPA ratio	NPAs/total loans
7	Ratio of priority sector lending	Priority sector advances/total advances
8	Interest income ratio	Interest income/total income
9	Ratio of wage to TI	Wage bills/total income
10	Cost of funds	Interest cost/total liabilities
S. No	Banking industry factors (external factors)	
1	Deposit to GDP	Banking sector deposits/GDP
2	Market cap to GDP	Market capitalisation of listed company/GDP
S. No.	Macroeconomic factors	
1	Inflation of a nation	Inflation growth rate of that nation
2	GDP growth of country	Annual GDP growth rate of that country

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Part III
Consumer Behaviour and Marketing

Chapter 11

Tell the Tale: A Conceptual Attempt on a Digital Marketing Strategy for Start-Ups



Tarun Chandila, Abhipsa Satpathy, and Abraham Cyril Issac

11.1 Introduction

Start-ups are ventures with novel ideas which are relatively new in the competitive market space (Luger and Koo 2005). A start-up is a venture that is founded by a single person or a group of people, called entrepreneurs, the purpose of which is to provide a product or a service that is deemed to be in demand by consumers. These companies usually start with high costs with limited reserves of revenue. The term start-up struggles with clarity of its meaning despite the fact that it is used widely (Savey et al. 2020). Scholars interpret the term differently (Mazzarol 2015). The term has evolved over time as companies ranging from small enterprises to large technology companies have come to call themselves start-ups. According to some researchers, a start-up is one that has been in the industry for less than a decade (Laari-Salmela et al. 2019). An extensive literature analysis by Gruber (2004) shows few start-up characteristics which include novelty, smallness and volatile environment. A start-up is a business or endeavor whose founders are primarily interested launching a single good or service. These companies typically do not have a full-fledged business model and, more importantly, suffer from insufficient capital to move to the next phase of their business. Their initial funding are usually born by the founder themselves.

Start-ups thrive on technology enabled practices. Technology has pervaded every sphere of the start-up ecosystem, and marketing is not an exception. Technology has helped translating the conventional marketing into the digital format where notifications, emails and pop-ups inform the Internet user about the companies' presence without any additional effort from the latter's side. Digital marketing connects

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businesses to ideal customers on search engines, social media with social media marketing and email with email marketing. A digital marketing plan is a requisite for start-ups in these competitive times. Digital marketing is a prevalent marketing technique in the tech-savvy environment. Digital marketing for start-ups helps make meaning out of complex customer behaviors. Creating a niche and distinct identity in the modern technological era is an essential strategic requirement for start-up companies, which today require brand marketing methods that differ from traditional methods (Mingione and Abratt 2020). Start-ups have proven to be essential drivers of economic growth and have grown in importance around the world over the past two decades (Mingione and Abratt 2020). Governments all around the world have motivated and encouraged start-ups to gain an advantageous position in the competitive marketplace (Glaeser et al. 2010). Digital marketing aims not just to create diverse platforms for the distribution of goods and services, but also to establish relationships and engagement with consumers. Moreover, they help to improve customer experiences. Start-ups should therefore engage with novel areas of connecting with the consumers and communicate with them effectively (Mazzarol 2015). Digital marketing practices pay emphasis to the product image, brand awareness, and brand loyalty (Krishnaprabha and Tarunika 2020). These aspects are essential to grow the start-up business. As digital channels enable two-way connectivity, businesses continuously seek to digitally partner and collaborate with consumers to drive consumer engagement, awareness, and value creation (Krishnaprabha and Tarunika 2020). In this regard, digital marketing has the capacity to attract new brands to customers and make advertising more widely accessible. One of the major challenges that obstructs start-ups' growth is the identification of a suitable marketing technique which is sustainable (Rajagopal and Davila 2020).

Every year, thousands of start-ups with innovative concepts strive to enter the marketplace. Some of them are instantly recognizable, but most of them struggle to establish themselves. Only a half of the newly established companies barely make it beyond 5 years after their inception (Rennie 1993). As discussed before, without a proper marketing strategy it is unfeasible for a start-up to compete with incumbent profitable companies. One of the main factors that start-ups struggle with is not having a comprehensive digital marketing strategy (Montgomery et al. 2018). Proper execution of a digital marketing strategy is absolutely necessary for the growth of a start-up company. Digital networks come in handy for start-ups in forming high-value partnerships with online communication users (Hajli et al. 2017). Start-ups functioning in various industries possess great potential to grow and opportunities to create value for consumers through innovative goods and services offered by digital proliferation. This makes it a viable marketing platform for start-ups and small businesses that do not have a large share of resources or large capital expenditures (Montgomery et al. 2018). Digital marketing is also faster medium and performs better the conventional ones (Montgomery et al. 2018).

The term "digital marketing" has seen evolution over time from a distinct description of the marketing of products and services using digital platforms to a more generic term that refers to the process of utilizing digital technology to draw customers, establish consumer habits, support brands, keep customers and increase

revenue (Kannan and Li 2017). This makes digital marketing an agile method which companies use for working together with customers and partners to develop, connect, generate and retain value for all stakeholders (Kannan and Li 2017). Internet marketing refers to using digital technology to achieve marketing goals (Chaffey 2009; Chaffey and Smith 2017). Digital marketing uses media devices such as smartphones, computers and related devices to reach consumers through social media, applications, search engines and related methods. Digital marketing has huge potential to proliferate consumers' life at a deeper level than just making them purchase. One of the important goals of digital marketing is to find out how customers use technology and assimilate this information for the advantage of the organization, enabling the service provider to communicate more effectively with their potential customers (Teixeira et al. 2018). The ripples of digital marketing can stay beyond the online use hours as customers spread the messages about products and services the instance they receive information about it (Bala and Verma 2018). Marketing through digital media is a strong tool used by organizations and marketing managers to engage consumers, build brands and achieve success (Fulgoni and Mörn 2009). Advertisements, commonly known as pay-per-click ads, are a common way of engaging the Internet users. Some are small text-based ads, others are shopping ads. Companies add more visual, product-based ads that allow consumers to see important information like prices and reviews at a glance (Panchal et al. 2021). While the bright side of digital marketing is evident, its sensitive side holds true as well. Social media influence is frequently used for attracting a young group of potential consumers. Companies need to be particularly more cautious when using advertising, especially when it comes to anticipating consumer reaction. Avoiding unexpected mistakes is essential to prevent a widespread consumer backlash on social networking platforms. Social media contributes to the promotion mix in a variety of ways. It enables businesses to communicate with their customers while also enabling the potential ones to interact with each other (Saravanakumar and SuganthaLakshmi 2012). The company's first priority is to get the client conversations, so that they are in line with the organization's objectives. Businesses offer networking platforms to their customers to keep them busy with blogs and other social media tools. Marketers today see social media as a great opportunity to boost market share figures (Sherly et al. 2020). Marketers are swiftly adopting the social web as it serves as a new set of channel for the promotion of their products or services. As social media marketing is becoming an issue of interest for businesses, it is enabling them to connect with their clients. In this process, they are able to market their goods, establish their brands and increase client loyalty. It has a pivotal role in marketing strategy for generating leads, spreading awareness on brands, building relations and retaining customers between purchases through various types of marketing emails (Wheeler 2017). A lack of these type of crafty marketing strategy might be associated with fall in success of the startups (Winer 2001). Emails are catalyst in enabling personalized, active contact that makes an informed customer satisfied by suggesting their preferences. When they receive the emails after giving their consent, customers become active participants in the communication process. By crafting relevant emails for the recipients, email marketing may be used to engage the customers (Bowden and Mirzaei 2021). To

make the most of the channel, however, present email marketing methods need to be changed. It is received relatively quickly and favorably, making it easy and convenient to communicate with customers (Rettie et al. 2005). This is an effective way to promote an emerging e-commerce store or website through online advertising (Bala and Verma 2018).

The study aimed at exploring an effective marketing strategy for start-ups because many of these newly formed businesses lose out on an opportunity to sustain due to lack of competitive advantage in marketing strategies (Öndas and Akpınar 2021). They lack visibility in the market (Jain 2015) and thereby lack connection with consumers. So, the marketing strategy of start-ups should start with understanding the target audience, their behavior and the nature of your business. Start-ups need to think differently than others in creative ways but at the same time, they also need to understand why one strategy is better for them than others.

Digital marketing facilitates start-ups to encourage two-way communication with their customers using suitable materials. Emotional engagement with a brand is more likely to happen when appropriate content is used as a part of the strategy. In addition, digital marketing has the capacity to let the companies forge a unique identity for themselves in the market ecosystem leading to more trust between the consumers and the brand. This process drives the start-ups' interaction with customers, solicit their feedback and enhance the quality of their products and services. All of these help consumers form a positive perception of the start-up. Brand awareness, consumer trust and loyalty are pivotal for the expansion of start-ups and catalysts for their success. Building consumer loyalty, brand awareness and trust is essential for the expansion and success of start-ups. This study aims to uncover the factor which strengthens the relationship between start-ups and the consumers. It also aims to identify a key aspect of digital marketing strategy and how to incorporate it into start-ups in an effective way. The obvious difference between traditional and digital marketing is a tactical shift in the emphasis on the consumer. Like large and small retailers, start-ups also need to identify a suitable non-traditional form of digital marketing to engage a large pool of consumers (Husain et al. 2016).

The study attempted to check whether a marketing strategy can be understood from the vantage point of consumer-start-up connection. This attempt has been done with the help of two theoretical frameworks which have served the management and social sciences field in diverse ways. The first one is the narrative theory taken from Walter Fisher's proposition. The theory stands on the premises that people are essentially storytellers. They perceive others as actors and characters of a story and their narrative is essential for understanding them. Thus, Fisher's narrative paradigm would enable analysts to understand the rationale behind user's tendency to connect better with companies through their stories, rather than claims. Because of this, start-up narratives that convey a tale may be a very powerful means of delivering persuasive communication such as social engineering, public health interventions and commercial marketing efforts. Many advertisers acknowledge the power of narratives given the amount of advertisements that tell stories (Brechman and Purvis 2015). There are various methods to describe narrative. At their most basic level, brand tales provide marketers the chance to demonstrate and convey in an interesting and engaging way

how consumers may use their goods to generate meaning (Singh and Sonnenburg 2012). The narrative form is constrained creatively and practically by conventional advertising units. As a result, there is now a more expansive understanding of story in terms of advertising. A related theory, the theory of narrative transportation explains that users are shifted to a vivid world through the narrations used by organizations (Chang 2009). It is a basic and evolutionarily designed method of human social interaction. Its distinctive blending of tale elements and narrative structure results in a potent means of information delivery. When used properly, narratives speed up information processing such that readers display higher levels of memory and belief modification than readers of the same material delivered in explanatory form (Green and Brock 2000). Other sorts of story advertising that are connected to this category may be lifestyle related, transformational ads (Puto and Wells 1984), testimonials, and more (Mick 1987). In order to produce a good impact that is favorably connected with brand attitude and behavioral intentions, a narrative advertisement sweeps the viewer away from critical thoughts. Personal self-interest is used to mediate processing in overt attempts at persuasion. Advertisers give consumers with (what they believe to be) persuasive arguments to buy a specific product. With claims and warrants in hand, customers will weigh the evidence and perhaps come up with counterarguments. On the other hand, a well-written tale serves the demands of the reader. Effective stories downplay these logical motives and focus on other incentives such as distraction or diversion (Slater 1997). Consumers who do not think in narrative form engage in analytical self-referencing, according to Escalas (2007), which can lead to elaboration and, in turn, a critical assessment of the strength of an argument. On the other hand, effective story communication encourages greater peripheral processing, where persuasion is unaffected by weak arguments. However, brand awareness is not a prerequisite for all types of impact. Brand placement can have an impact on brand associations, preferences and decision under implicit or narrative processing situations (Heath 2000).

The second theoretical framework is the theory of impression management. Impression management, also known as self-presentation, involves “the processes by which people or organizations control how they are perceived by others” (Leary 2001). It posits that people are more moved to control how others perceive them when they believe that their public images are relevant to the achievement of desired goals. In a similar sense, “impression management is woven intimately into the fabric of the marketing enterprise” (Fisk and Grove 1996, p. 8). The goals for which their impressions are relevant are valuable, and a discrepancy exists between how they want to be perceived and how other people perceive them. The impression management process is influenced by environmental, situational, actor and audience elements (Gardner and Martinko 1988). Gardner and Martinko (1988) assert, building on Goffman (1959), that “actors pick those acts they believe would produce the greatest favorable impression”. The extent to which the audience perceives an actor’s performance to be consistent with how the audience defines the circumstance affects how well the actor’s presentation is received. When congruence is high, the performer has a higher chance of making the right impression and getting a positive reaction. Contrarily, negative perceptions and unfavorable audience reactions are more likely when the

audience feels the actor's presentation is improper. Luxury goods' image management technique may help them finally stand out in the athleisure industry (Oh and Kim 2022). Research suggests that people frequently use impression management techniques to intentionally generate or avoid particular pictures of themselves from a socially acceptable standpoint (Ashworth et al. 2005; Leary and Allen 2011). In order to identify a commercial benefit from knowing how props and identity tags are used to help with self-presentation, marketing scholars have found new aspects of these props and identity tags as extensions of the self (Shulman 2022). Studies show that those who have lesser impression are more reckless while making purchasing judgments for other people when compared with purchasing choices for themselves (Kim et al. 2022).

The paper unfolds with an introduction of the start-up environment. This is followed by providing an orientation on digital marketing. Moving forward, we discuss why it is important for start-ups to be more vigilant about digital marketing techniques and taking recourse to two theoretical frameworks for understanding the solution. This is followed by the paper trying to conceptualize the relationships among the variables of storytelling, authenticity of the start-up's narrative and how it is moderated by perceived responsibility of the storyteller. The study aims to put all these variables in perspective to establish their relationship with consumers' connection with start-ups. Thereafter, a short discussion on these relationships is done and the conceptual model is presented. Then, the theoretical and industrial or practical implications are discussed. Furthermore, limitations of the study are delineated and scope for further advancement of the model is presented. Lastly, the paper closes by summarizing and proposing the way forward.

11.2 Digital Marketing and the Start-Ups

The goal of digital marketing is to create an integrated, targeted and quantifiable communication via the use of digital technology (Wymbs 2011). Digital marketing as a technique has been used to capture attention of users (Nawaz and Kaldeen 2020). It is usually studied as an advancement in technology in the sphere of marketing. Such studies create a better understanding of the technological aspect of the strategy, but at the same time leaves some loose ends for other perspectives to tie up. One such aspect is the emotional part of the consumers. Although affect-related purchasing behaviors are evident from existing studies (George 2004) such as impulse buying (Youn and Faber 2000), buying out of curiosity (Hsee and Ruan 2020) or for instant gratification (O'Donoghue and Rabin 2000), this list is non-exhaustive. Start-ups are new entrants in the market space and to create a niche they need quick connection with the consumers. Striking a connection in the first few appearances needs the consumers to resonate with the start-ups' own narrative.

11.3 Storytelling as a Strategy for Start-Ups

Storytelling as an emergent marketing technique speaks about catchy content creations (Pulizzi 2012). However, the mechanism behind why this strategy works is yet to be understood in a deeper sense. This brings this study to the narrative theory which explains why people connect to stories more than a claim (Woodside et al. 2008). Narratives are anchored in the assumption that people are essentially storytellers. Stories connect people at a deeper cognitive level as they process the journey of the characters in association with their own. We propose that this connection will give an edge to the start-ups over others because customers become a part of the start-ups' story.

In light of the impression management theory, the narratives run by the start-ups need to align with the broader goals of their existence (Goffman 1959). The stories that are being told to the customers about the start-ups' identity leaves a lasting impression on the latter's mind if it is commensurate to their perceived reality (Escalas 2004). The need for resonating with the target audience has to be fulfilled by generating a narrative which the viewer finds authentic and relatable. They need to immerse in the story itself. This immersive experience can cement the link between customer and start-ups and give them an added advantage in the ecosystem.

11.4 Storytelling and Authenticity

Authenticity or being one's true self is an explored topic in management literature. It is an important feature of personal branding when using storytelling (Korzh and Estima 2022).

Studies have linked authentic leadership's role in building trust through their own story building (Weischer et al. 2013). Authentic leaders are individuals who, because they are true to themselves, show consistency in their beliefs, words and actions. If leaders are to be perceived as authentic, followers must be able to ascertain them as acting true to themselves (Fields 2007, p. 198). Likewise, start-up owners can bring in authenticity in their stories which builds trust in the consumer.

11.5 Authenticity and the Consumer Connect with Start-Ups

Consumers connect to a brand by weaving their own stories into the brands (Escalas 2004). This process requires the perception of the start-up story to be authentic in order to leave a sustaining remark on the latter's perspective. Customers' view of a company's authenticity is a crucial factor in determining its brand equity, which has a big influence on consumers' brand choice intentions (Lu et al. 2015). Consumers use

various cues on the brand's roots and virtues to perceive its authenticity (Morhart et al. 2015). Hence, authenticity plays an important in the relationship between storytelling and customer connect.

11.6 Perceived Responsibility of the Storyteller as a Moderator

According to studies, companies' social stance is effective in engaging the audience (Key et al. 2021) and they have become more conscious about what type of stories they are associating themselves with. In this regard, the role of the storyteller is pivotal in persuading the audience. It is observed that the storyteller does impact how audience are influenced depending on who tells the story (Pachucki et al. 2022). Stories can come from a range of people associated with the company ranging from the founder to the customers. Studies on identity of the speaker reveal that when the narratives come from the founder, impact is more (Kang et al. 2020). Research is scant in delving deep as to why some stories work better than others. We attempt to answer this question by using the term perceived responsibility to imply the perception of the audience about the storyteller's sense of responsibility in their story. Perceived responsibility of the storyteller can be taken as an enhancer of the relationship between storytelling and authenticity of the stories.

11.7 Discussion

The study tried to elaborate on the need for storytelling for start-ups for striking a connection with the audience. We figured out how these are related to authenticity in the narratives and perception of responsibility by the storyteller. It binds them with the storyteller and trust is built between them (Li et al. 2019). Having explored the extant literature, we found out that relationship exists between the impressions that are formed through stories and the consumer engagement with brand (Spear and Roper 2013). Studies already show that impressions can be formed through storytelling for the internal stakeholders (Nyagadza et al. 2019). These impressions are explained by the theory of impression management which was used to explain how start-ups can choose to present themselves to consumers through responsible narratives. The connection of the narratives with customer connect was mediated by authenticity which talks about how truly the narrative presents itself. The relationship of storytelling and authenticity was, in turn, moderated by perceived responsibility of the storyteller. Impressions formed by stories lead to consumer connection with the brand, but there has to be an element of authenticity. The storytelling-authenticity connection can be enhanced through the perception how responsible the storyteller seems. This brings us to the conceptualized model (Fig. 11.1).

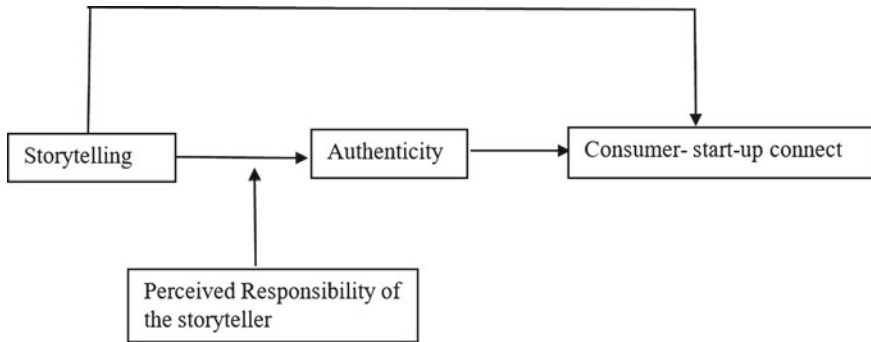


Fig. 11.1 Conceptual model: Author's own representation

11.8 Theoretical Implications

This paper works as an extension to the existing works on storytelling technique for marketing. It adds the perspective to the interconnectedness of the concepts of storytelling, authenticity, consumer connect and perceived responsibility of storyteller. In addition, it brings in new implementation of the theories of narrative and impression management by combining them for explaining consumer connect. It sheds light on the concept of perceived responsibility in the context of storytelling strategy, which opens up a new horizon on the existing theoretical elaborations.

11.9 Practical Implications

The model can serve as a guide for start-up entrepreneurs, marketing professionals, especially in the domain of digital marketing. This study provides for a sustainable practice to capture a dedicated audience in the marketplace. The understanding on perceived responsibility of the storyteller can be taken forward to build a strategy for digital marketing. Furthermore, involving the patrons of the start-ups in their responsible narratives will help them connect better with their customers. The storyline can be weaved into the brand image of the start-ups which will give them a unique identity in the marketplace. This strategy can be beneficial especially for health start-ups who converse with their audience through narration of health transformation stories. The perceived responsibility of the story teller in a health-based start-up can create an emotional and motivational connect with potential consumers, as the healthcare start-ups are on a rise in Indian settings (Sampat et al. 2020).

11.10 Limitations and Future Research

The study faced the challenge of time constraint, and hence a scope for further scope for additions to review of literature and empirical testing is open. Consumer connect can be elaborated in further researches to understand deeper cognitive and affective aspects of consumer relations. Furthermore, perceived responsibility of a company can be studied in association with perceived authenticity as an attitudinal change toward that brand or company. The study didn't distinguish among industries and provided a general overview for start-ups in the conceptualization. Further studies might want to investigate the variables in an industry-specific context.

11.11 Conclusions

The paper gives a value addition to the existing body of knowledge on storytelling for digital marketing. Although discussions were present in the earlier literature on storytelling and consumer engagement, the moderating role of perceived responsibility of the storyteller provided a new dimension to the concepts. Storytelling can be adopted by start-ups for carving a niche for themselves in the growing digital arena. Our attempt to conceptualize and understand the undercurrent of an effective strategy for digital marketing by start-ups converted into the final outcome as a model. It has built on the researches and on the frameworks of narrative theory, narrative transportation theory and impression management theory.

Implications for theoretical understanding and industries were delineated. Incorporating a storytelling strategy into the marketing domain can boost consumer-start-up relationship.

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Chapter 12

Tactical and Fast or Wise and Slow?

A Conceptual Framework Understanding Impulse Buying Behaviour of Customers: Mediation–Moderation Model



Mansha Rani, Dhritima Dutta, and Abraham Cyril Issac

12.1 Introduction

With the proliferation of hypermarkets and shopping centres in urban areas, the modern retail environment is expanding daily (Stern 1962). The success of the firm is highly influenced by customers' responses to the marketing plan of the company, and thus an organization needs to look at consumer behaviour. In the consumer behaviour field, research in impulsive purchase behaviour has long attracted interest (Clover 1950; Stern 1962). The study aims to develop a conceptual framework of impulse buying behaviour and its antecedents that can be investigated and empirically tested in future.

Consumers' impulse buying behaviour has emerged as a visible behaviour as a result of changing lifestyles and rising money. As said by O'Brien (2018), \$5400 per year on average is spent by the customers on impulse buying of household items, clothing, shoes, and food. In the retail industry, a large amount of sales comes from impulse buying (Sundström et al. 2019; Zhang et al. 2020). In retail outlets, up to 40% of all purchases can be categorized as impulsive purchases, according to statistics (Hausman 2000). Indian consumers have displayed a significant change in their shopping behaviour and impulse buying has emerged as a notable behaviour. Thus,

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investigating consumer impulse buying behaviour as well as the factors leading to such behaviours is important for researchers. When Clover (1950) realized that most of a company's sales were unanticipated and unplanned, he created the term "impulse buying." For the past 60 years, researchers have been interested in the study of impulse purchasing (Clover 1950; Stern 1962; Rook 1987; Peck and Childers 2006). Piron (1991) reviewed the past research works to define impulse buying where he found earlier researches stating similarity between impulse buying and unplanned purchasing (Clover 1950; West 1951). When predicting a purchase, explanations of impulse buying prior to Rook's (1987) study tended to focus mostly on the product. In early studies, the dispositional traits of consumer were not included as a factor influencing spontaneous purchases. Later, researchers examined a variety of impulsive behaviour traits with an emphasis on individual impulsivity

According to Rook (1987), while making an impulse purchase, customers experience a strong, instantaneous, and an enduring desire. He characterized an impulse purchase as an unplanned, unthinking activity that follows exposure to internal cues. Impulse buying is an unanticipated action characterized by hurried decision-making and a tendency to buy the product fast, as suggested by Rook and Gardner (1993).

A customer makes an impulse purchase when they are suddenly struck by an intense want (Block and Morwitz 1999). As emphasized by Kacen and Lee (2002), unplanned activity is more exciting and less intentional than purchases that are planned.

Buyers who experience sudden cravings to buy specific or general items and services belong to this group. A sudden need to buy is started by roughly 50% of individual-related factors, according to the KPMG 2014 report. Consumers' preference for making purchases has been significantly impacted by the shop's fundamental factors. Psychologists have found that each person has a particular tendency for irresponsible behaviour. According to studies on consumer purchasing patterns, acting irresponsibly, buyer impulse is described as a lifestyle trait in a report. The most of studies have assumed that consumers have shifted towards a rush buying tendency as they report more impulses to buy and revive impulsive purchases. The mental state of the person and age are other elements that can cause impulsivity as a feature. It has been demonstrated that low or depressed moods cause impulsive buying. Studies have found the strong link between culture and impulsive purchasing. Impulsive behaviours are more popular or familiar in individualistic nations than in socialist nations.

Because of the ease of access to applications at any time and from any location, technology is one factor that encourages impulse buying (Akram et al. 2018). Global technological and marketing trends' innovations have made impulse buying move from the traditional in-store retail environment to various online mediums, including social commerce, mobile commerce, and electronic commerce. As more people choose the internet market, the business centre has evolved from being a physical structure to becoming a specific website or platform on a network, which is better suited to electronic marketing. Because customers place a high value on convenience and customization, mobile marketing is becoming an increasingly important component of e-marketing today.

Studies have anticipated that online buying and selling, particularly in a mobile context, will influence customer behaviour and lead to logical purchases. This is so that users can compare prices and information about products and services more effectively. Mobile internet has effective properties and offers a variety of information. Consumers are then expected to make a purchase using logic and reasoning. However, it is a fact that not all shoppers behave logically and rationally when making online purchases. Thus, the phenomena of impulse buying result from it. Online shops are still trying to establish themselves in this cutthroat environment, as online purchasing is still a relatively new practise. Surveys show that from 81 per cent in 2014 to 86 per cent in 2015, more customers made purchases online. There is a strong urge for browsing information as part of the purchasing behaviour of clients that leads to an impulsive purchase while shopping online as there is no physical contact or tactile touch of the goods.

Impulsive consumer purchases have a tremendous impact on the entire consumer market. The internet consumer market has evolved into a virtual environment for impulsive purchases since it can be accessed at any time and from any location. As a result, the impulsive internet shopping behaviour of consumers has become a key research area. Live streaming shopping is particularly successful at persuading customers to make impulsive purchases because of the constrained shopping time and variety of goods and services, the possibility to observe other customers' purchases, and the pressurized environment of the store.

There are two theoretical frameworks upon which the current study is built. The Stimuli–Organism–Response (S–O–R) framework, put forward by Mehrabian and Russell (1974), is a cognitive psychology theory that emphasizes on the mediating role of individual physiological activities. According to this theory, both exterior environmental stimuli as well as the internal condition (i.e. organism) influence consumers' decision about whether or not to purchase a product. This framework is considered to be effective at bringing the focus into behavioural variations that are being generated by a variety of marketing stimuli as well as cognitive influences.

The S–O–R theory is frequently used to describe behaviour of customers, notably based on the influence of internal psychological states and behavioural responses on consumers' responses to external environmental factors, particularly when considering how consumers' psychological states and behavioural responses are influenced by external environmental stimuli.

Jing and Sung (2019), on the basis of S–O–R model, investigated the impact of service recovery on customers' behavioural intentions displayed in online shopping malls. Based on this theory, Hu et al. (2012) looked into the effects of information form and content on consumers' decisions to purchase. In impulse purchase research, the S–O–R framework has been used in both online (Ampadu et al. 2022; Djafarova and Bowes 2021) and offline (Hashmi et al. 2020) contexts. Hashmi et al. (2020), using the S–O–R paradigm, discovered that certain elements at store operate as external stimuli that cause hedonic emotions of arousal and pleasure among customers. These feelings function as an organism and cause impulse purchase behaviour, which is a reaction.

Ajzen (1991) created the Theory of Planned Behaviour (TPB) as an expansion of the Theory of Reasoned Action (TRA). This hypothesis was designed to explore the purpose of an individual's conduct. Since its creation, this theory has been successfully used to numerous contexts to understand and predict human behaviour in a variety of fields, including marketing, the health sector, and the tourism sector (Sanne and Weise 2018). According to this notion, a person will be more successful at acting out a particular behaviour the more strongly they intend to do so. Three factors, according to this theory, namely, attitude towards behaviour, subjective norms, and perceived behavioural control—have an impact on a person's desire to behave. Because this theory has the capacity to predict a variety of behaviours and is suitable to explain intents, TPB is the basis for studies linked to online purchase behaviour (Godin and Kok 1996). TPB as a theoretical basis has been used in various studies on food consumption, while investigating the variables that impact consumer intentions and actions.

12.1.1 External Factors and Customers' Impulse Buying Behaviour

External factors are those external cues which the marketer controls in order to tempt customers into impulse purchase behaviour (Youn and Fabor 2000).

12.1.1.1 Advertising Appeals

Advertising is one of the ways through which impulse buying behaviour could be increased (Chen et al. 2019). Impulse behaviour is driven by marketing communication (Iyer et al. 2020). However, empirical evidence that links advertising and impulse behaviour is limited. Expenditures at advertising and impulse buying sales volumes are huge (Deshpande et al. 2022). Still, there is not much work relating the two, and therefore, studying the effects of advertising on impulse buying becomes crucial. Why consumers engage in impulse behaviour is explained by self-regulation theories (Vohs and Faber 2007). It is often difficult for customers to resist temptations when they lose their self-control and thus they experience a strong urge to buy impulsively, leading to impulse buying (Deshpande et al. 2022). Sales promotion is another way that customers are compelled to buy. A huge portion of the overall budget of marketing is represented by sales promotion expenditure, and this makes impulse buying due to sales promotion a topic worth considerable for marketing managers (Marco et al. 2022). The intrinsic reward experienced during sales promotions has been often considered a significant factor that encourages impulse buying. Both in offline and online settings, positive effects have been observed, thus proposing a universal impact of promotional activities on impulse buying. Products are sold at lower prices than normal during flash sales for a restricted quantity and little time

(Lamis et al. 2022; Zhang et al. 2018). As emphasized by Liu et al. (2021) and Nigam et al. (2020), selling products during flash sales is beneficial for consumers who are very conscious about price and purchase more when the offer is tempting. Impulse buying is found to be positively related to promotional strategies such as free gifts, price reductions, coupons, membership discounts, sweepstakes, or refunds in online environment (Dawson and Kim 2009). Following studies examining the effect of group buying, bonus rewards, and bonus packs observed similar results (Hin and Huang 2014; Lo et al. 2016). Further, Liao et al. (2009) and Bandyopadhyay et al. found supporting evidence in brick-and-mortar settings. The positive effect that price-offs, free goods and vouchers have on impulse purchases marked by previous knowledge of the product is shown by Liao et al. (2009). Unplanned purchases are made by consumers because they want to take advantage of sales, coupons, and incentives. Through sales promotion, the store can draw in new customers and convince them to buy the goods. In short, promotional items encourage consumers to make unplanned buying. These results suggest the positive effects of sales promotion, discounts and offers on the impulse purchase behaviour of a customer in retail businesses. According to competitive arousal theory, consumers' decision-making is impaired due to the competitiveness felt by them because of perceived rivalry, social facilitation, time pressure, and uniqueness of being first (Ku et al. 2005). Impulse buying could also be increased through promotional messages that emphasize the scarcity of an offer (Wu et al. 2021). As suggested by Lo et al. (2016), impulse buying is strongly influenced by combining utilitarian (money-saving) and hedonic (entertainment) benefits provided by sales. Impulse buying is especially incited by immediate rewards that are provided by promotions (Liao et al. 2009). For instance, reduction in product price leads consumer to decide impulsively and make impulse purchases (Chen and Wang 2016). Impulse buying behaviour is found to be effectively stimulated by bundle offers (Zafar et al. 2021); free shipping (Dawson and Kim 2009); added donations (Jeffrey and Hodge 2007); and cash refund promotions (Chen and Wang 2016).

12.1.1.2 Visual Merchandising

It is the practice of enhancing the way products and services are presented in retail industry to better highlight their benefits and features. Products are presented or displayed in a way that makes them visually appealing and desirable. Visual merchandising, according to Garvey, is all about making the customer feel how the marketer wants them to feel. It requires months of planning to make a window ready for display. A store makes money through the merchandise on display. Mannequins, backdrop, props, and fixtures are arranged in a way that compels customers to enter the store and make a purchase. It emphasizes on capturing attention by combining visual and other sensory elements, awakens the senses through music and scents, deals with which products should be carried to particular shelf space, and provides a wonderful buying experience for customers in order to achieve sales. As stated by Sebastian, visual merchandising covers all areas from outside of the store to the location of

each product inside the store. According to Bashar and Irshad, impulse purchasing is positively related to window display. When the consumer forgets to put goods on the prepared list, an unexpected purchase may occur.

According to the claim, impulsive buying only happens when three conditions are satisfied. First of all, the purchase is unexpected, and a happy feeling also arises at the same time. Second, the buyer does not consider the long-term effects of the decision. Finally, it meets the needs of the customer.

12.1.1.3 Store Environment

The physical setting of a store includes a variety of components, including lighting, colour, displays, music, store layout, and the presence of salespeople. The in-store environment is said to be the most important component in impulsive buys as it makes customers want to buy more. Environmental factors like colour and display have an impact on buyers' impulse buys. A pleasing display also makes a customer feel more at ease, which encourages them to stay in a business longer. The crowding effect is another environmental signal that has a big impact on how shoppers see things. The amount of products in a store, the distance between the shelves, and the placement of the furniture all affect a customers' perception of overcrowded. According to this theory, customers are less likely to make an impulse purchase if they feel uncomfortable in the store's environment. This is because a crowded environment increases the likelihood that they will feel uncomfortable. Consumers' impulsive purchase behaviour is negatively impacted by their view of the store as being crowded. In addition, it is said that the friendliness of the salesperson influences the customer's purchasing behaviour positively, increasing the customers' desire for impulsive buying. Store managers need to be aware of the ideal combination of environmental aspects while seeking to develop a suitable in-store atmosphere. For instance, playing loud or inappropriate music could upset or irritate customers and have negative impacts. Similar to this, poor or overly bright lighting detracts from visual appeal. Because it represents their emotional response, perception, and impact, in-store surroundings must be intriguing enough to keep customers there for a longer period of time and encourage them to buy things. This leaves a positive impression of the store in the minds of the customers. Impulse buying is significantly influenced by in-store environment controlled by retailer (Badgaiyan and Verma 2015). The store generates positive emotions, hedonic motives, and shopping fun in consumers, thus creating an atmosphere that encourages impulse buying (Hashmi et al. 2020). A suitable atmosphere for impulse shopping is also created through employee assistance, the lighting of the store and layout cleanliness (Badgaiyan and Verma 2015). E-store components and their design facilitate impulse buying in an online context. The website's quality matters to influence impulse purchasing in customers (Akram et al. 2018; Kimiagari and Malafe 2021). According to Parboteeah et al. (2009), online shopping websites provide customers task-relevant and mood-relevant cues. Ease of use and navigability are some of the task-relevant cues that affect impulse buying (Kimiagari and Malafe 2021). Mood-relevant cues are those

which make the process of browsing enjoyable for consumers (Parboteeah et al. 2009). For example, high-tempo music and visual attractiveness of a website can trigger impulse buying by increasing shoppers' experience of pleasure and arousal during browsing (Chen et al. 2020; Zhang et al. 2020).

12.1.1.4 Online Reviews

Going through online reviews during browsing is another factor that can influence impulse buying behaviour (Ampadu et al. 2022; Chen et al. 2019). Good quality review which is highly helpful to a customer and originates from a reliable source can increase positive affect in customers which, in turn can increase their impulse buying behaviour. In particular, online reviews can trigger customers' impulse buying with a strong hedonic message than those that focuses on utilitarian information (Zafar et al. 2021; Zhang et al. 2018).

12.1.1.5 Social Media Influence

Browsing social media platforms often lead consumers to interact with various social cues and consequently make impulse purchases (Kimiagari and Malafe 2021; Zafar et al. 2020). People feel connected to the online community through various posts and comments shared on social media which increases their pleasure and arousal, thus causing impulse buying (Ju and Ahn 2016). Furthermore, impulse buying can also be induced among young adults through endorsements on social media by digital celebrities (Zafar et al. 2021). Therefore, we hypothesize as follows:

H1: External factors are positively related to impulse buying behaviour.

12.1.2 External Factors and Emotional Arousal

Individual's affective responses are influenced by both environmental stimuli and individual traits, which then generate response behaviours (Baker et al. 1992). Research in environmental psychology states that specific (positive or negative) emotional reactions can be caused by exposure to environmental stimuli, consumers' traits, and personal motives (Babin et al. 1994; Donovan and Rossiter 1982; Mehrabian and Russell 1974) which further mediates the influence of external, personal, and situational factors on impulse buying (Parboteeah et al. 2009; Verhagen and Van Dolen 2011). Effect that a media format has on impulse buying intentions online is mediated by dominance, arousal and pleasure experienced at the time of purchase (Adelaar et al. 2003). Verhagen and Van Dolen (2011) found that consumer's beliefs about online stores and the probability of them purchasing products impulsively are mediated by positive emotions. Negative emotional reactions might be caused by store environments such as money and time resources (Lucas and Koff 2014;

Vohs and Faber (2007), further suggesting the need to empirically discover the more prominent emotions.

12.1.3 Arousal and Impulse Buying Behaviour

According to research in environmental psychology, particularly the stimulus–organism–response (S–O–R) model, experienced emotions act as probable mediating constructs. Arousal is the extent to which individuals feel alert, stimulated or excited. Previous empirical evidence shows that impulse behaviour is majorly driven by consumers' emotional states. For instance, influence of both store environment and promotional messages on impulse buying is found to be mediated by emotions of pleasure, arousal and enjoyment (Wu et al. 2021). According to Chang et al., consumers who experience positive emotions are more involved in impulse buying. Verplanken and Herabadi (2001) highlight that customers who are involved in impulse buying have a tendency to show emotions at any point of time during their purchase (i.e. before, during, or after). Further, according to Bandyopadhyay et al. and Liu et al., the relationship between consumer-related factors and impulse buying can be mediated by effect. Product-related stimuli or the process of browsing often activate a flow experience; further causing impulse buying. Liao et al. (2009) also stated that consumers' pleasure and arousal can be increased by the product type and the mode of presentation, inducing impulse buying in the traditional shopping industry. The present study proposes a mediating role of emotional arousal in the relationship between external factors (advertising appeals, visual merchandising, store environment, online reviews, social media influence) and impulse buying behaviour. Therefore, we hypothesize as follows:

H2: Emotional arousal mediates the relationship between external factors and impulse buying behaviour.

12.1.4 Intention to Buy as a Moderator Between Arousal and Impulse Buying Behaviour

According to the Theory of Planned Behaviour (Ajzen 1991), consumers' behaviour is a result of their intention to perform that behaviour. This study thus proposes a moderating role of intention to buy in the relationship between arousal caused by the external factors and impulse buying behaviour of customers. Intention to buy as a moderating variable on the relation between emotional arousal and impulse buying behaviour has not been researched much. Therefore, we hypothesize as follows:

H3: Intention to buy positively influences the relationship between emotional arousal and impulse buying behaviour.

12.2 Discussion

The objective of the research is to assess customers' impulse buying behaviour and their antecedents. A conceptual framework has been developed and it proposes that external factors like advertising appeals, visual merchandising, store environment, online reviews, and social media influence have a direct relation with impulse buying behaviour. Advertising is a way through which impulse buying can be increased (Chen et al. 2019). Because of their potential to capture buyers' attention, advertising appeals such as discounts on sales can be used to promote and increase product sales (Zhang et al. 2018). Furthermore, online marketplaces are benefitted by flash sales as number of visitors and income increases during sales. According to Huang et al., in online contexts, higher purchase intention among consumers with a strong sense of power is a result of scarcity appeal.

Another relationship suggested by the current study is the significance of emotional arousal in mediating the relationship between external influences and impulse purchasing behaviour. This is backed by the assertion that emotional or affective states have a greater influence on impulse purchasing (Verhagen and Van Dolen 2011). Earlier studies found that most impulse purchases are emotional rather than rational (Stern 1962; Zafar et al. 2021).

The present study also suggest that intention to buy would act as a moderator on the relationship between emotional arousal and impulse buying behaviour, thus proposing that the relation between emotional arousal and impulse buying would be stronger when there is an intention to buy the product. In impulse buying, customers do not go through the rational decision-making process which calls for various steps like searching information about products, recognizing the problem, looking for available alternatives, and post-purchase evaluation. Based on the impulse, the individual acts. Individuals who have less control over their emotions cannot resist their temptation of purchasing because of their high buying impulsivity (Fig. 12.1).

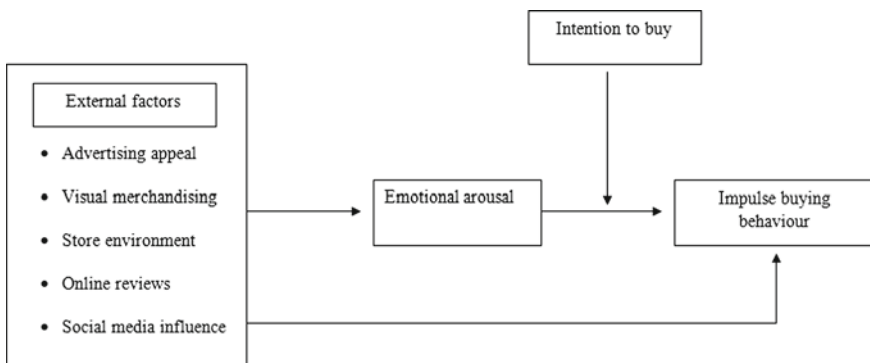


Fig. 12.1 Conceptual framework

12.3 Conclusion

This study gives insight into how impulsive purchase behaviour generates profit for sellers and improves the shopping experience for customers. It also shows the different factors that lead customers to buy impulsively. The aim of the study was to build a conceptual framework on impulse buying behaviour and its antecedents. The study proposes that emotional arousal could mediate the relation between external factors and impulse buying behaviour. It also proposes that intention to buy a product could moderate the relation between emotional arousal and impulse buying behaviour.

12.4 Theoretical and Practical Implications

This paper contributes to the theoretical basis of impulse buying behaviour research. It synthesizes the stimulus organism response framework and theory of planned behaviour to explain the moderating and mediating effects of emotional arousal and intention to buy in impulse buying behaviour. A conceptual model is developed on the basis of antecedents, moderator, and mediator of impulse buying behaviour. The present paper studies the external antecedents of impulse buying (advertising appeals, visual merchandising, store environment, online reviews, and social media influence), emotional arousal as the mediator of external factors, and intention to buy as the moderator between emotional arousal and impulse buying in a cohesive framework. The study has identified some areas that have received less research attention and proposed future directions for research in this domain. Examining the future directions put forward by this study will expand the knowledge of impulse buying.

The present study also has some practical implications. This study will assist retail store owners in utilizing elements that will support consumer attitudes that will further help contribute to impulse buying in order to increase their firms' sales. The study suggested that advertising appeals and store related factors leads to impulse buying. Thus, both offline and online stores can design their elements strongly to influence impulse buying. Online retailers can improve impulse sales by employing customer reviews. They can design their page in such a way that enables web shoppers to filter the online reviews according to their choices. E-retailers can also use various social media sites to increase users' impulse purchase since social media is one of the significant factors influencing impulse buying. Online retailers, in order to generate a sense of comfort in consumers' consciousness, they should regularly update their commercial websites and provide better web design with rapid, informative, and convenient features. This study will also probably help consumers understand the factors that contribute to their impulsive behaviour, helping them avoid making unwanted purchases in the future.

12.5 Limitations and Future Research Directions

Although our paper theoretically and practically contributes to the study of impulse buying behaviour of customers, it has certain limitations. The paper also suggests directions for future research. Future studies can empirically test the conceptual model developed by in this study. Sociodemographic factors were not included in our study. Therefore, future studies can look into these factors as well as examine other extrinsic factors in the impulse buying behaviour context. Our conceptual framework does not include the intrinsic elements that could affect impulse buying behaviour of customers. Hence, future studies can consider the intrinsic factors and investigate the interactive effect of both external and internal factors.

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Chapter 13

Modelling Consumer's Mobile Wallet App Adoption and Its Continuous Usage: The Case of India



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13.1 Introduction

13.1.1 Mobile Phone User Growth

India, in the year 2018 with around 483 million users of the internet, has marked its position as the second number in the world in the internet consumption category, and around a total of 73 per cent of the internet traffic is generated through mobile phones only. The two major reasons behind such growth are the low-price smart-phone availability in the Indian market and, secondly, the government policies and announcements in telecommunications providing new licences to the new entrants (Keelery 2019). The payment industry does not remain untouched by the mobile phone growth, and smartphones paved the way to include the mobile as a way to make payments by users. As per the statistics, since the year 2019 Indian economy has shown a drift towards cashless payments, and mobile payments have contributed significantly to processing the payments. The mobile payments were seen to 286 billion dollars, whereas the payments made through the card (debit or credit) both online and in-app were recorded at only 204 billion dollars only. Earlier demonetization and then the novel coronavirus pandemic have also impacted cash payments (Sharma 2020).

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The usage of payment methods like plastic money from cash-based transactions has taken a new face when digital payments were welcomed by consumers for their expenses. The announcement of the digital policy and demonetization policy of the government has incited digital payments among consumers. Mobile payments, one of the forms of digital payments, were observed as the most-used mode of payment in the past few years (Patil et al. 2017). The growth of the mobile industry is also another reason to mark the rapid adoption of mobile wallets by the masses as there are low-priced smartphone sets, easy, and fast availability of internet connection, and economic data tariffs are available to the consumers (Madan and Yadav 2016). A mobile wallet is more like a metamorphose look of the traditional wallet which is transformed into an electronic mode and need not be carried by consumers everywhere. The functionality of the mobile wallets remains the same as it used to be of the traditional ones like storing the currency but not in a cash form rather as information of bank and account details and others and offers cash, card, and contactless payment option to its consumers (Amin 2009; Shin 2009). The mobile wallet share in India is recorded to take a significant hike of around 1.5 trillion rupees which was recorded at 1.5 billion rupees in the year 2016. With such a high increment, the transactions completed through mobile wallets will reach an amount of 260 billion in 2022 (Statista 2016).

The rationale of the study is rooted in the fact that, despite being a convenient mode of payment, consumers hesitate in adopting mobile wallet apps. The risk related to the fund transfers, providing information like bank accounts and others, incapability to deposit and withdraw cash, authentication of the transactions, and acceptance at the wallet apps by the bottom of the income pyramid are few of the factors that are recorded as the inhibitors of the wallet app adoption (Sherman 2014; Madan and Yadav 2016; Patil et al. 2017). Moreover, India is a cash-driven economy, thus making it imperative to explore wallet app adoption by risk-averse population (Shaikh et al. 2018) of India as very few studies have been conducted in the Indian context (Zhao et al. 2015). The app stores are flooded with the apps which cater to the same category, and it becomes important to study what makes a consumer choose a specific wallet app among the hundreds of apps available to them. Thus, this gap in adopting the wallet apps at the mass level motivates to carry out the research. An extensive literature review of the existing studies suggested that there is a dearth of studies related to wallet app adoption in developing countries. Thus, the study aims to fulfil the following two objectives Objective 1: To explore the factors that impact wallet app adoption.

Objective 2: To study the mediating effect of satisfaction on wallet app adoption and its continuous usage.

The present study was conducted in India, which has been recorded as the second most smartphone user market worldwide. A policy like demonetization and then COVID-19, as people fear that viruses can be transmitted by cash (Auer et al. 2020), have paved a way for digital and mobile payments in a cash-based economy like India. Due to these reasons, India has served as a good environment for conducting this research. The current study contributes to the existing body of knowledge by introducing an extended UTAUT model for mobile wallet app adoption in India,

so the mobile wallet providers and the implementing and regulating authorities can plan a roadmap for better adoption and usage of these apps. The ensuing section comprises the extended literature review and hypotheses, followed by the research methodology section. Next, the paper presents the discussion and the implications drawn based on analysis. Lastly, limitations and suggestions for future research are presented.

13.2 Literature Review

13.2.1 Mobile Payments

Payments made by the use of wireless and communication technologies are to make payments or paying bills with the help of a mobile device, i.e. mobile phone is termed mobile payments, which are broadly categorized into two categories: firstly, payments for buying goods or services and, secondly, paying the bills and invoices (Dahlberg et al. 2006). Since the inception of monetary payments, it has come a long way. Earlier there was a barter system involving exchanging goods for grains, then came the coins and paper cash leading to the introduction of bank accounts, and lately, cashless payments have shown a great revolution in the payment industry (MEDICI 2018). Primeindexes (2019) defined mobile payments as the payments made by the users with the help of a device that is easily movable from one place to another such as a mobile phone, PDA, or tablet making it ubiquitous so that payments can be made at anytime, anywhere on the globe. The inception of mobile payment dates back to the 1990s, when in 1997 the consumers of Coca-Cola were introduced to the vending machines to get drinks by text message, and in 1999, the money transfer service PayPal was launched in the market. However, 2000 was the year when the first-ever mobile payment licence was filed, and in 2011, Google wallet was launched in the market as a mobile wallet which is followed by Apples' passbook. In the year 2014, Apple launched another payment method, i.e. Apple pay. And in 2015, Android pay and Samsung pay were launched in the online payment market.

A mobile wallet is a digital wallet, where a user stores the details of his or her cards (debit or credit or both) and uses them to make payments providing various cash backs, discounts, and offers to wallet users (Primeindexes 2019). Raina (2015) defined a mobile wallet as a payment method where the user makes the payments with a click on the app where the user has already stored the required information to make the payment. The mobile wallet can be either a client wallet or a hosted wallet. In the client wallet system, the financial details of the user are stored on the card which is a type of sim and stays on the mobile only. The drawback of this system is that if the device is stolen or lost, then users have to compromise on the part of the sensitive information stored by them on the device. The latter is better than the former one in terms of safety and security as these wallets have better control over the functioning of the wallets.

13.2.2 Overview of Technology Acceptance Theories and Research Framework

Technology has always been a major constituent of human lives, and varied models and theories have been propounded by various authors in different time frames to study the information system or technology adoption among users. The few eminent theories in the field of information technology adoption are the theory of reasoned action, the theory of perceived behaviour, the technology acceptance theory, the unified theory of acceptance and use of technology, and the expectation-confirmation theory. The technology acceptance model and the unified theory of technology are the preferred theories of information technology acceptance in the field of management (Taherdoost 2018). As the technology acceptance models were developed for the technologies which were used at the workplace by the single user and restricted to time and location, the current technological developments are beyond time and location constraints. Thus the inclusion of new factors and expansion of theories are required to predict the adoption of current technological advancements (Röcker 2010; Sharma and Mishra 2016). Venkatesh and Davis (2000) had extended the original technology model by adding the perceived usefulness and usage intentions' determinants. Again, in 2008 (Venkatesh and Bala 2008), TAM was further extended by adding the determinants of perceived ease of use (technology acceptance model 2 or TAM 2). Another important and most used technology acceptance theory is a unified theory of acceptance and use of technology (UTAUT) given by Venkatesh et al. (2003), which further is extended with the addition of three new constructs, namely price value, habit, and hedonic motivation to study the behavioural intention and technology use (Venkatesh et al. 2012).

The technology acceptance model (TAM) has been widely used by researchers over the years to study various technological advancements, and a significant amount of mobile wallet studies has adopted TAM as the base of the research. The technology acceptance model has been recognized as the vigorous model in information technology studies and provides parsimonious results (Rao and Troshani 2007). Davis (1989) introduced technology acceptance model (TAM) to study the usage of computers by human beings. TAM is an extension of the theory of reasoned action (TRA) (Shin 2009; Amin et al. 2015). According to the technology acceptance model, perceived usefulness and perceived ease of use are the main determinants of the users' attitude towards any information system adoption (Yan and Yang 2014). Authors (Amin 2009; Shin 2009; Amin et al. 2015; Patel 2016; Kumar et al. 2017; Deka 2020) adopted the original TAM model and modified and extended the model as per their research.

The other most used and adopted most to study the technology adoption behaviour of the users is the unified theory of acceptance and use of technology (UTAUT). The UTAUT model was proposed to study the adoption intentions of the information systems in an organizational setting (Rao and Troshani 2007). This model was built by decomposing the earlier eight technology acceptance models and consisted of four exogenous and one endogenous variable, namely performance expectancy, effort

expectancy, social influence, facilitating conditions, and behavioural intention (Shin 2009). The performance expectancy and effort expectancy are the substitutes for the perceived usefulness and perceived ease of use, respectively, which were the main determinants of the attitude in TAM (Madan and Yadav 2016). Further, this model was extended to focus on consumer usage rather than explaining employee use behaviour (Venkatesh et al. 2012). The three new exogenous variables price value, habit, and hedonic motivation were added to the existing UTAUT model. To study the customer satisfaction post-purchase or post-adoption behaviour, (Bhattacharjee 2001) proposed a post-acceptance model of information system continuance. The findings of the model are that satisfaction has emerged as the strongest predictor when individuals are intended to continue to use the systems in future and various researchers in their studies also confirmed the same (Hong et al. 2006; Wang et al. 2013).

Over the years, research conducted in marketing and consumer behaviour literature has shown contradicting results when it comes to studies related to the technology adoption behaviour among users, and no sole theory or model can be applied to study consumer behaviour (Madan and Yadav 2016). Also originally the theories were developed to use in an organizational context, and wallet apps are highly used by consumers for their personal use (Rao and Troshani 2007). Hence, the present study adopted the original TAM and UTAUT model and extended them by adding constructs, aesthetics, and incentives to study the consumers' acceptance of mobile wallet apps.

13.3 Research Model and Hypotheses Development

Based on the extensive previous literature on technology adoption and employing TAM and UTAUT models, the present study explores the factors influencing the consumers' acceptance of use of mobile wallet apps as an alternative payment method for their financial transactions in India. Performance expectancy, ease of use, social influence, facilitating conditions, enjoyment, aesthetics, incentives, and trust are considered the determining factors of mobile wallet app adoption among the users.

13.3.1 Performance Expectancy

Performance expectancy is defined as “the degree to which using a technology will provide benefits to consumers in performing certain activities” (Venkatesh et al. 2012). This is similar to the concept of perceived usefulness, which refers to increasing performance by using a technology or information system to carry out that task (Foroughi et al. 2019). In the mobile wallet app context, performance expectancy may be described as an alternative mode of making payment which will

result in a fast, quick, and accurate payment process in their day-to-day transactions. Authors (Madan and Yadav 2016; Qasim and Abu-Shanab 2016) validated in their study that performance expectancy influences the consumers' attitude towards wallet app adoption. Hence, the following hypothesis is proposed.

Hypothesis 1: Performance expectancy has a significant positive effect on wallet app adoption.

13.3.2 Ease of Use

Ease of use is similar to the effort expectancy construct proposed in the UTAUT theory (Madan and Yadav 2016). Ease of use is defined as “the degree to which a person believes that using a particular system would be free of effort” (Davis 1989). And effort expectancy is defined as the “degree of ease associated with consumers' use of technology” (Venkatesh et al. 2012). Researchers (Zhong et al. 2013; Aydin and Burnaz 2016) confirmed in their studies ease of use as a predictor of wallet app adoption. So, in the mobile wallet app context, we define ease of use as the technology which consumers find easy to use with clear instructions to conduct the payment and does not require much effort to use the wallet apps. Hence, the following hypothesis is proposed.

Hypothesis 2: Ease of use has a significant positive effect on wallet app adoption.

13.3.3 Social Influence

Social influence is described as “the extent to which consumers perceive that important others (e.g. family and friends) believe they should use a particular technology” (Venkatesh et al. 2012). People in real life observes them who influences or to whom they find important in their life which in turn influences the choices made by them and are more tend to use those products or services which are recommended or endorsed by the others (Megadewandanu et al. 2016). Previous researchers (Aydin and Burnaz 2016; Madan and Yadav 2016; Qasim and Abu-Shanab 2016) have confirmed that social influence plays an important role in accepting the technologies like wallet apps or mobile payments in their lives. Hence, in the study the following hypothesis is proposed.

Hypothesis 3: Social influence has a significant positive effect on wallet app adoption.

13.3.4 Facilitating Conditions

Facilitating conditions are described as the surroundings which make it easy or help the people to adopt or accept the new technology, system, product, or service. It refers to “the consumers’ perceptions of the resources and support available to perform a behaviour” (Venkatesh et al. 2012). These resources either can be physically present in the environment or can be in terms of policies or regulations required to perform a particular behaviour. Earlier researchers in their studies adopted this construct and confirmed that facilitating conditions influence the users’ attitude in a positive and significant way (Limantara et al. 2018; Chawla and Joshi 2019). However, Megadebandanu et al. (2016) do not support the same and reported that facilitating conditions being limited to avail. Hence, the following hypothesis is proposed.

Hypothesis 4: Facilitating conditions have a significant positive effect on wallet app adoption.

13.3.5 Enjoyment

Enjoyment or hedonic motivation or fun is the pleasure which is derived by the consumers when they use any information system or technology and is a form of extrinsic motivation. Lee (2009) adopted the construct in their study of mobile games and confirmed that if any user uses the technology and finds it enjoyable, he is more likely to retain and use it. Rouibah et al. (2016) also confirmed in their study that enjoyment acts as an important determinant in online payment methods. Hence, the following hypothesis is proposed.

Hypothesis 5: Enjoyment has a significant positive effect on wallet app adoption.

13.3.6 Aesthetics

Aesthetics refers to the attractiveness of the product or service that includes the design and colours that attract the users to use the system (Jun and Palacios 2016). Heijden (2003) used the term “perceived physical attractiveness” in their study of website usage and defined it as “the degree to which a person believes that the website is aesthetically pleasing to the eye.” According to the author, the visual appearance includes the colours and layout of the website. Lazard et al. (2016) mentioned that the good looks of the technology results in defining the user’s decisions process from the very beginning and keep influencing constantly. Aesthetics is found as an important factor which plays an important role in technology acceptance and influences people’s perceptions in turn influencing the attitude towards the usage of technology (Malik et al. 2017). However, the term has not been studied so far in the context of wallet apps; hence, the following hypothesis is proposed.

Hypothesis 6: Aesthetics has a significant positive effect on wallet app adoption.

13.3.7 Incentives

Consumers are more likely to adopt new technologies or systems when they receive some benefits over the existing systems or technologies. Incentives are the various gains which are received by the consumers in the form of some discount coupons, cash back offers, cash credits, loyalty benefits, and others which are offered to consumers when they use the wallet apps available in market to complete their transactions. Some reports revealed that wallet apps offer cashback and discounts, which provides advantages over other modes of payments to consumers (Behani 2019; Seth 2020). Indian consumers are more price-sensitive and look for the discounts (Malik et al. 2017). Hence, the following hypothesis is proposed.

Hypothesis 7: Incentives have a significant positive effect on wallet app adoption.

13.3.8 Trust

There are a number of studies who incorporated trust as an important determining factor when consumers are intended to adopt online payment methods (Srivastava et al. 2010; Chauhan 2015; Yan and Pan 2015; Qasim and Abu-Shanab 2016; Malik et al. 2017; Sharma and Sharma 2019). Sharma and others (Sharma and Sharma 2019) in their study have confirmed that trust plays an important role in determining the consumers' intention to use mobile banking and also results in forming a positive perception of the consumers towards mobile banking. Trust plays an important role in when consumers are dealing with in monetary terms and has been highlighted by the researchers as an important factor in wallet app adoption intentions and actual usage (Sarika and Vasantha 2018; Chawla and Joshi 2019). Hence, trust in this study has been incorporated as an antecedent to adopt wallet app, and the following hypothesis is proposed.

Hypothesis 8: Trust has a significant positive effect on wallet app adoption.

13.3.9 Wallet App Adoption

Technology acceptance model (TAM) states that attitude and intention are closely related to each other. Usage of any product or service by an individual is found to have a long-lasting impact on continuing a particular behaviour (Ho 2010). Previous researchers (Lin 2011; Praveena and Thomas 2014; Foroughi et al. 2019) have

confirmed that attitude served as a major determinant to the intention to continue to use the various information systems, viz. e-learning, social media platforms like Facebook, etc. Amoroso and Lim (2017) highlighted in their findings that undifferentiated competitors' presence in the market confirms that attitude is the strongest determinant of the continuance intention. Hence, in this study we propose that adoption acts as a determinant to continuous intention to use mobile wallet apps.

Hypothesis 9: Wallet app adoption has a significant positive effect on continuous intention to use wallet apps.

13.3.10 Satisfaction

Customer satisfaction is considered as an important determinant of post-purchase intention by the users (Deng et al. 2010; Ghani et al. 2017). It has also found in the previous studies that satisfaction emerged as an important factor that significantly mediates the relationship between the pre- and post-performance of the systems and results in enhancing the usability of the systems (Al-hawari and Ward 2006; Lai and Pires 2010). Isaac et al. (2017) confirmed in their findings that satisfaction directly and indirectly mediates the actual usage and the performance impact. It helps in determining the success of the information system used by the individual and looking forward to continuing to use it in future too.

Similarly, satisfaction also leads to the loyalty towards the instant mobile messages among the Chinese population, significantly mediating the relationship between its antecedents and loyalty (Deng et al. 2010). Thus, the following hypothesis is proposed for the study.

Hypothesis 10: Satisfaction mediates the relationship between wallet app adoption and continuous intention to use It.

13.4 Research Methodology

13.4.1 Research Model

Based on the extensive literature review discussed above and focus group study results, the conceptual model for the study has been developed and illustrated in Fig. 13.1. The model proposes that mobile wallet app adoption is determined by the user's performance expectancy, ease of use, social influence, facilitating conditions, enjoyment, aesthetics, incentives, and trust.

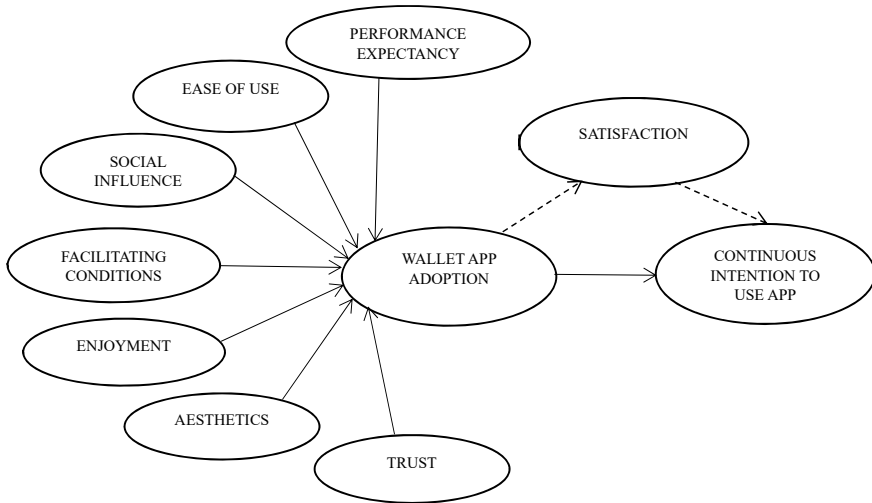


Fig. 13.1 Conceptual model

13.4.2 Research Instrument

The research instrument used to conduct the study was composed of three sections. The first section comprises the preliminary investigation questions related to wallet apps, the second part comprises the statements measuring the theoretical constructs, and the last and third part was composed of the demographic details of the respondents. A total of eight independent variables were considered to measure the dependent variable including a total of 41 items. The statements were adapted from the previous studies. The references of the sources of the scales are given below in the table. A 7-point Likert scale was used to measure the responses which were anchored as “strongly agree” to “strongly disagree.”

13.4.3 Sampling Technique and Sample Profile

The study used a purposive sampling technique to select the targeted respondents for the study. The residents from the Delhi National Capital Region were approached to collect the information fulfilling the three conditions. First, the respondents had to have an internet-enabled smartphone, and second, they had to have a bank account. The impetus behind choosing the sample from Delhi NCR was that the people from all over India come and reside in this region for various purposes, hence making it a replica of the whole nation (Madan and Yadav 2016). Therefore, the chosen sample was considered to be appropriate for the research area undertaken in the study. A total of 520 responses were received, of which 424 seemed suitable for the

study (43 responses were excluded because the respondents mentioned that they have never used the wallet app before and also not using currently, and 53 responses were excluded being incompletely filled by the respondents). Among them, 75.7 per cent were male and 24.3 per cent were female. As for age, most of the responses were given by the respondents being to the age group below 30 years of age (59.9%) followed by the age group between 30 and 45 years (35.4%), and the last 4.7 per cent were above 45 years of age. Regarding their qualification, 51.7 per cent were post-graduate, which was followed by 46% of the graduates and 2.4% mentioned them under other categories at the university level. Furthermore, the majority of respondents (48.1 per cent) were the students at the university level, and rest were salaried (43.6 per cent), 6.4 per cent were the home-maker, and 1.9 per cent constituted the retired group.

13.4.4 Data Analysis

The summarized demographic details of the respondents are given below in Table 13.1.

AMOS 20.0 was used to create the measurement model and to carry out the confirmatory factor analysis, where PE, ease of use, social influence, facilitating conditions, enjoyment, aesthetics, incentives, and trust were the independent factors and mobile wallet app adoption was the dependent factor. The model fit measures were calculated, and the four major criteria, i.e. CMIN/df, CFI, GFI, and RMSEA were reported as the goodness of fit of the model. The model fit measures are given below in Table 13.2. From the results, it is observed that GFI and CFI values are greater than the accepted range, i.e. must be equal or > 0.9 , CMIN/DF was < 3 , and RMSEA was < 0.8 . Hence, the measurement model qualifies the model fit criteria.

Table 13.1 Demographic details of the respondents

Demographics	Subcategories	Frequency	Percentage
Gender	Male	321	75.7
	Female	103	24.3
Age group	< 30 years	254	59.9
	30 years–45 years	150	35.4
	More than 45 years	20	4.7
Qualification	Graduate	195	46.0
	Post-graduate	219	51.7
	Others	10	2.4
Occupation	Student	204	48.1
	Salaried	185	43.6
	Home-maker	27	6.4
	Retired	8	1.9

Table 13.2 Model fit indices of measurement model

Statistical fitness index	Estimated value	Required value
CMIN/df	1.302	< 3
Goodness of fit index (GFI)	0.925	More than 0.8
Comparative fit index (CFI)	0.989	More than 0.9
Root mean square error of approximation (RMSEA)	0.027	< 0.08

Table 13.3 Reliability and validity analysis

Constructs	Cronbach’s alpha	AVE	MSV
Performance expectancy	0.915	0.730	0.564
Ease of use	0.919	0.738	0.564
Social influence	0.921	0.744	0.581
Facilitating conditions	0.921	0.744	0.581
Enjoyment	0.879	0.647	0.342
Aesthetics	0.898	0.745	0.536
Incentives	0.907	0.710	0.557
Trust	0.892	0.676	0.533

Further, reliability, convergent, and discriminant validity of the constructs were tested. Cronbach alpha was used to calculate the reliability of the data collected. The results of reliability and validity analysis are shown below in Table 13.3. The results of reliability analysis were reported between 0.879 and 0.921 which being greater than the required range 0.7; hence, the data is highly reliable.

Convergent validity of the data was confirmed as the average variance extracted (AVE) for every factor was found to be more than 0.5 (ranging from 0.647 to 0.745). Similarly, discriminant validity is also confirmed as the average variance extracted was found greater than the maximum shared variance. AMOS is used to construct the structural model (Fig. 13.2).

The *p*-values of the proposed hypotheses were computed for the structural model and given below in Table 13.4. It can be observed from the results that the *p*-values of all the factors came out < 0.05. Hence, hypotheses H1, H2, H3, H4, H5, H6, H7, and H8 were accepted.

The mediating effect of the satisfaction on mobile wallet app adoption and continuous intention to use app were analysed by using the bootstrap mediation process. The results of the analysis are given in Table 13.5.

Results have shown that the probability value of the path coefficient (wallet app adoption to continuous intention to use = 0.697) is found to be < 5% level of significance. Thus, the total effect of the adoption of the wallet app on continuous intention to use the app is significant. The indirect effect of wallet app adoption to the continuous intention to use the app through the mediating construct satisfaction is found to be significant (wallet app adoption to satisfaction to continuous intention to use = 0.479, *p*-value = 0.000). Therefore, satisfaction of the customer after using the

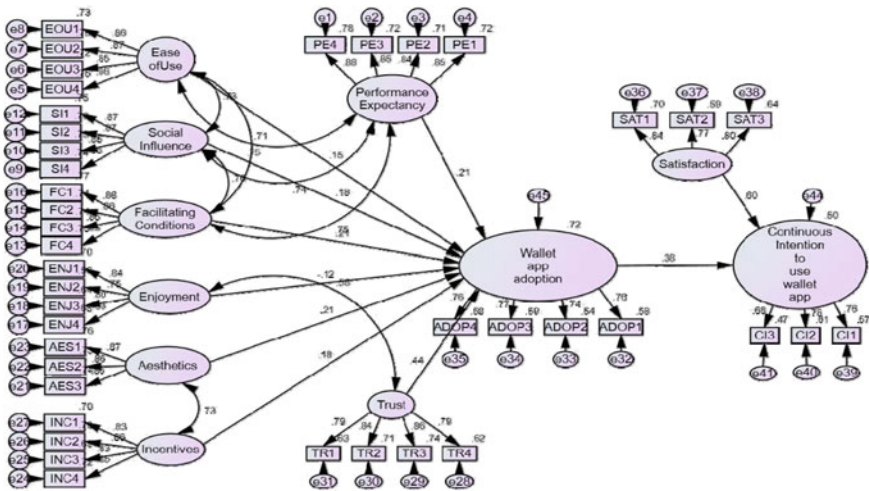


Fig. 13.2 Structural model of wallet app adoption and continuous intention to use it

wallet apps plays a significant mediating role between the adoption of wallet apps and continuous intention to use the apps. The direct effect of wallet app adoption on the continuous intention to use the app is found to be significant (path coefficient = 0.218, p -value = 0.022). Since, the direct effect is found to be significant; hence, the mediation effect is said to be partial mediation effect.

13.5 Discussions and Conclusion

The study was aimed to analyse the mobile wallet app adoption among the Indian consumers for making their financial payment and as an alternative method to the existing ones. The two new factors are successfully added to the existing theory of technology. Results of the study showed that seven factors except enjoyment, i.e. performance expectancy, ease of use, social influence, facilitating conditions, aesthetics, incentives, and trust were found positively significant to the mobile wallet app adoption among the consumers.

The results of the study are found consistent with the past studies and confirm the relationships between the exogenous and endogenous variables.

- It is observed that ease of use and trust were found to be the two most significant factors that influence the wallet app adoption. Ease of use is positively significant to the mobile wallet app adoption and supports the findings of the previous research conducted in the field of mobile app adoption (Sivathanu 2019; Widyanto et al. 2020). Results show that when consumers find technology or systems easy to use and they are able to understand the functioning of the technology clearly, then they

Table 13.4 *P*-values of the constructs

Constructs	Performance expectancy	Ease of use	Social influence	Facilitating conditions	Enjoyment	Aesthetics	Incentives	Trust	Satisfaction	Continuous intention
<i>P</i> -value	0.004	0.025	0.020	0.002	0.016	***	0.002	***	***	***

Table 13.5 *P*-values of the constructs (mediation using bootstrap SEM)

Effect type	Standardized path coefficient	<i>P</i> -value	Conclusion
Total effect (wallet app adoption → continuous intention to use wallet app)	0.697	0.000	Significant partial mediation exists
Indirect effect (wallet app adoption → satisfaction → continuous intention to use wallet app)	0.479	0.000	
Direct effect (wallet app adoption → continuous intention to use wallet app)	0.218	0.022	

are intended to adopt that technology in their daily lives. Learning to use the new technology and to be skilled is one of the important reasons that make consumers adopt and use the new technology. Trust has also emerged as the most significant factor in adopting the wallet apps by the consumers. When the consumers find the wallet app as a trusted and genuine service provider, they are more intended to use that service as compared to other methods of payment. This result has supported the previous findings (Madan and Yadav 2016; Sunny 2018).

- It is observed that performance expectancy has a positive and significant influence in mobile wallet apps (Nicole et al. 2015; Leong et al. 2020). The consumers found mobile wallet apps useful and are able to make their payment quick and fast. The wallet apps have made the payment process an easy phenomenon for the consumers for their various transactions. As a result, mobile wallet apps are perceived by the consumers as an alternative solution to traditional methods of payments.
- Another factor that found to be positively significant with mobile wallet app adoption is social influence. Consumers are more likely to be influenced by their close-knit social network which includes their family members, relatives, friends as well as the people who inspire or are the ideal for them. When these people provide them good feedback for any new technology, then consumers perceive it more authentic as compared to any other source of information. Hence, social influence is another important factor that motivates the consumers to adopt new technology, and these findings support the previous studies too (Nicole et al. 2015; Madan and Yadav 2016; Sivathanu 2019).
- The necessary resources required for using a technology play an important role in adoption and usage of the technology. In the case of mobile wallet apps, resources like availability of smartphones, data packages, network connectivity, knowledge required to operate, and others are the important ones which influence the adoption of these apps in daily lives of the consumers. Previous studies (Madan and Yadav 2016; Lin et al. 2020) confirmed that there is a significant relationship between facilitating conditions and wallet app adoption. And the results of the present study also confirm the same.
- The findings of the previous studies related to enjoyment and behavioural intention were also supported by the results of the present study, as enjoyment also found

a significant factor influencing mobile wallet app adoption. Consumers using mobile wallets for making their payments find it is a fun and enjoyable activity. Wallet apps being a new method of payments make people use this method and not let them get bored with this method as compared to cash payments.

- Aesthetics has also emerged as an important factor of wallet app adoption among the consumers, which supports the previous research (Parra et al. 2012). Aesthetics has been unstudied in information technology research, though it has always been an integral part of interactive communication systems. Consumers are offered to customize the information technology products as per their desire, making it an important part of IT. The absence of systematic literature of aesthetics and technology acceptance and the growth of information systems or technology from industry to academic to personal usage have made it a salient factor that needs to be explored (Lavie and Tractinsky 2004). Heijden (2003) also mentioned in their research and directed their study towards the understanding of the relationship between the information system features and its actual usage. Wallet apps which are appealing have colourful appearance and attractive, have influenced the consumers' perception, and made them to use the wallet apps in their lives.
- Mobile wallet apps are opted by consumers as an alternative solution for payments when there is no availability of cash or any other mode of payment. As the demonetization policy has impacted the cash-based transactions, non-availability of the cash also made consumers to adopt this mode of payment, and the incentives and financial offers also triggered the adoption rate of the wallet apps (Tiongson 2015). Hence, this adds a factor that influences the consumers' perception to use wallet apps. Also, in this study the significant influence of incentives on wallet app adoption is also confirmed.
- Mobile wallets are the new method of payments that have gathered the consumers' attention being an easy and reliable mode of payment, but India being a majorly cash-based economy resulting in the less adoption rate of the mobile wallets. The results of this study are helpful for wallet app providers and markets to understand what makes a consumer to adopt these apps and use them over other methods of completing their financial transactions, based on which they can design and strategize their products and services accordingly.

13.6 Limitations and Future Research

The study is carried out in the National Capital Region of Delhi in India; hence, the applicability of the results might not be the same for other geographies. The data was collected from the different demographics, which might have an influence on the study results. Limited factors were considered to analyse the wallet app adoption, while other important factors have been ignored. Factors like self-efficacy, government support, regulations, etc. may also be included as a part of the study. Future studies can be carried out by considering the comparative studies between different

geographies. The study is done cross-sectional, which can be carried out to check the longitudinal effects among the consumers.

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Chapter 14

Enhancing Brand Image: Brand Trust, Brand Loyalty, and Social Media Influences on Building a Brand Image



Nalini Palaniswamy and Muruganandam Duraiswamy

14.1 Introduction

Customers and brands are the key intangible assets of businesses. Businesses capitalize on acquiring new customers and retaining existing customers in order to boost current and future cash flows and, eventually, firm value (Gupta and Lehmann 2003). The COVID-19 epidemic has radically altered many aspects of existence. Local and multinational businesses are among the most affected sectors (Shaari 2020). When customers are loyal and the company has a good reputation, brand image is strong; but, when customers' preferences, attitudes, and behaviors begin to wane, brand image is weak. However, a brand could be able to survive in this new normal environment after the pandemic because of its prominent presence and demonstrating empathy and undertaking measures to maintain consumer relationships (Waldron and Wetherbe 2020). Some firms have achieved a good brand image by demonstrating their care and duty in battling the epidemic on both the local and international levels (Shaari 2020).

Is a client still devoted to a certain brand? Is there any major shift in customer brand loyalty as more individuals purchase online and their purchasing habits alter? According to a Valassis survey of "1000 adult consumers in the United States, ~ 48% of consumers bought the same brand they used before the pandemic, 21% considered mixing brands, 13% explored new brands, and 19% were less loyal and would consider whatever brand was available". Customers are not passive players in the creation of brands. It was discovered that customer loyalty is the most powerful driver

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of brand image across industries. In the customer–provider relationship, it is also the sole common, statistically significant driver of present revenue and growth potential (Berg et al. 2007). Through the viral or quick dissemination of product and service experiences and views, social media has the ability to generate awareness and interest. (Fournier and Avery 2011) even cautioned corporations against participating in social media because they can be “uninvited crashers,” meaning that creating brand connections through social media is more challenging than just promoting more interactions. To capitalize on social media’s interactive and engagement features, an increasing number of marketers have shifted their marketing objectives to focus on developing/maintaining a desired consumer-brand connection through social media involvement (Hudson et al. 2016).

14.2 Literature Review

14.2.1 Social Media

Social media was considered a more effective tool in determining the brand image and brand loyalty among customers which influence their attitude and behavior in choosing a product. Social media eases information sharing (Limaye et al. 2020) and participation and involvement from users of social media in order to curate and/or distribute user-related content (Shaari 2020). In the latest era, the endurance of a customer’s loyalty toward the brand is considered a key factor for the long-term success of companies (Assistant et al. 2016). "A firmly held commitment to rebuy or re-patronize a favoured product or service regularly in the future, despite situational factors and marketing efforts having the potential to promote switching behaviour," says the company (Barden-O’Fallon et al. 2018). Because companies and organizations are believed that brand loyalty is the key factor to retaining their customers. Therefore, companies, to enhance and maintain customer loyalty they are developing marketing strategies to enhance customer loyalty (Dahlgren 2011) using different tools and techniques out of which social media was the most efficient tool in reaching out to the customers through unremitting customer engagement (Parveen et al. 2015) qualitatively analyzed the major prominent factors that facilitate development, growth, and success of marketing. They reported saying that the key important element in digital media was consistent social media presence by suggesting that the media can be utilized for connecting with customers by understanding their requirements and getting their input. Companies may improve consumers’ faith in brands and drive the development of consumers’ connection to brands through their social media presence, thereby increasing their loyalty.

14.2.2 Brand Loyalty

Customer loyalty data increases comprehension of sales campaigns and their impact. For various reasons, both marketing practitioners and theorists regard loyalty as an essential notion. Creating a new client is nearly always more expensive than maintaining an existing one. According to (Hwang and Kandampully 2012), loyalty is a strong desire to persevere to support a chosen brand regardless of situational circumstances and marketing activities having the potential to promote switching behavior. Joseph et al. (2020) says brand loyalty is defined as "a firmly held commitment to patronize a product/service. It is described as a readiness to suggest, and it is a powerful predictor of a company's growth rate" (Jones and Taylor 2007). Brand loyalty, which is at the heart of brand equity (Bashir et al. 2020), is a critical measure of a brand's sustainability since being loyal to a brand makes its consumers less inclined to move to competitors, even if competitors offer greater benefits. Similar actions are carried out in social media platforms for the building and maintenance of brand loyalty as in traditional brand loyalty activity. Personalized offers and the development of loyalty programs are examples of this (Ulas and Vural 2018). Repeat purchase behavior is an axiomatic concept (Espinosa et al. 2018) that essentially mentions the amount to which customers repurchase a similar brand after the first experiencing it, resulting in brand loyalty. A customer that prefers their brand and is resistant to rivals' attempts to entice them away with alluring offers and promotions (Holmes et al. 2020). The influence of a loyal customer base serves as the foundation (Olivotti et al. 2019) for its position as a key ingredient in brand image assessments, and loyal customers are more profitable than non-loyal consumers (Joseph et al. 2020).

14.2.3 Brand Trust

Long-term relationships require a significant amount of trust (Zhang et al. 2020). Customer expected value, reliability, and customer awareness are some of the variables which contribute to brand trust. Brand trust helps to build long-term customer relationships and reduces uncertainty to decide on any purchases (Albert and Merunka 2013). Antecedents of repurchases create brand trust, and it is vital in building brand image (Huo et al. 2021). Consumers overall satisfaction with a brand (Hendriks and Bartram 2019) leads to brand trust. Creating a customer bond is important for trust, the major contributor to this bond is brand trust and loyalty, and it is an emotional bond and positive experience a customer creates over a brand (Madadi et al. 2021). Brand trust enhances the ongoing relationship with customers, and customer realizes their self-identity and self-esteem through brand trust. High congruence of the brand image leads to brand trust (Rather et al. 2019). Trust can predict satisfying outcomes, and brand trust regulates loyalty (Huo et al. 2021). Brand

trust and loyalty were a contributor to brand equity. Brand trust increases the brand association in the consumer's mind to recollect a brand (Kalhor et al. 2021).

14.2.4 Brand Image

The notion of brand image dates back to the 1950s in marketing literature and consumer behavior research. Brand image assists consumers in identifying the product and distinguishing the organization's offering from competitors' offers (Iglesias et al. 2020). The major contributor to brand loyalty is the brand image. Successful organizations have developed a distinct brand personality (Choi et al. 2022) and a long-term reputation for excellence, which is backed by advertising and other forms of brand support. A recognizable brand image to consumers may assist firms in hosting new brands and increasing sales of existing products (Sasmita and Mohd Suki 2015). A brand image delivers on its promises (Balmer et al. 2020). Organizations must guarantee that their personnel delivers on the brand's promises (Hur and Adler 2011). Retailers have long been recognized for creating an image or reputation in the eyes (Soegoto 2018) of their customers. Retailers have long been recognized for creating an image or reputation in the eyes of their customers (Mitchell and Balabanis 2021). The concept of "brand as a person" or user imagery has been related to brand image. A brand may be distinguished by endowing it with distinct personality features (Lau and Phau 2007).

14.3 Research Objective

Brand image is a customer viewpoint of a brand, and it is largely built by various factors like brand awareness, brand association, brand trust, brand loyalty, brand equity, and so on. Much literature highlights the antecedents and association of brands in consumer purchases; during pandemic, the customer's purchase decision was mostly driven by most of these brand factors, and additionally, on the other side, literature discusses the social media influences on purchase decisions during the pandemic and post-pandemic scenarios. The interface of these two concepts has proposed a few research questions like how we can enhance brand image through trust, loyalty, and social media. Is there any positive relationship among brand trust, brand loyalty, and social media and how far it predicts the brand image? A positive brand image will help the brand to survive in spite of uncertain market conditions which disconnect the product-customer interface in situations like a pandemic and also improves the share of mind and heart which otherwise improves the trust and loyalty. To enhance the brand image, the variables like brand trust, loyalty, and positive reviews of people play a significant role. Additionally, the study attempted to understand the difference between the frequency of purchase of brand and study variables (brand trust and brand loyalty). The research used appropriate methodology to collect, test, and analyze the variables used.

14.4 Methodology

14.4.1 Sample and Data Collection

To address the above research questions, the research objectives of the study were tested using a questionnaire-based survey. The study instrument was designed carefully considering the important variables and items of brand trust, brand image, brand loyalty, and social media. The study sample was collected in a time frame of 3 months in the second quarter of 2022. The study was conducted using a voluntary sampling technique, in which survey participants self-select to participate in the survey. These people frequently exhibit a significant interest in the survey's main issue. The sample of the study comprised consumers from different age categories. The questionnaire was distributed to people through various online modes, and 319 responses were received out of which 300 were found to be correct without any data missing. The questionnaire included demographic questions about age, gender, education, employment, and frequent purchases, as well as questions about the four constructs of brand loyalty (Budiman 2021), brand trust (Yohana et al. 2020), brand image (Huang et al. 2019), and social media influence (Ahmad and Murad 2020). Each item was rated on a 5-point Likert scale ranging from completely disagree to completely agree. The Cronbach's alpha value for 21 study variables is 0.925, and it is found to be a highly reliable instrument to measure the study variables. The analysis was carried out using Microsoft Excel and SPSS. To test the objective and hypothesis, the researcher used ANOVA and multiple linear regression.

14.5 Analysis

14.5.1 Respondents Profile

The age representation in the total sample includes the age group from 22 years and below (38.7%), 23–24 years (36%), and 25 and above (25.3%). The gender participation was male (52.7%) and female (47.3%). Education qualifications of the respondents include (6%) high school/diploma, (55.3%) bachelor's degree, and (38.7%) master's degree. The frequency of purchases of brand includes (64.7%) purchases a brand on monthly basis, (17.3%) purchases in a weekly basis, and 18% on a quarterly basis.

The significance of the difference among frequency of brand purchase, brand trust, and brand loyalty using ANOVA test.

H1: There is no Significant Difference Among the Frequency of Purchase, Brand Trust, and Brand Loyalty.

Table 14.1 shows that the result is significant and that frequent purchase of products by customer affects brand trust, where the F -value is of 4.427. The F -value of

Table 14.1 ANOVA table frequency of purchase vs. brand trust and brand loyalty

		Sum of squares	<i>df</i>	Mean square	<i>F</i>	Sig
BT	Between groups	3.806	2	1.903	4.427	0.14
	Within groups	63.189	147	0.430		
	Total	66.995	149			
BL	Between groups	4.479	2	2.239	5.910	0.003
	Within groups	55.695	147	0.379		
	Total	60.173	149			

5.910 approaches significance with a *p*-value of 0.003 (< 0.05 alpha level) and the brand loyalty value with a *p*-value of 0.014 (< 0.05 alpha level) (which is < 0.05 alpha level). It provides significant evidence against the null hypothesis, as the null hypothesis has a $< 5\%$ chance of being right (and the results are random). As a result, the null hypothesis is rejected and the alternative hypothesis is accepted. The frequency of purchase will be an influencing variable in creating brand trust and brand loyalty.

14.5.2 Correlation

H2: There is a Positive Relationship Among the Variables Brand Image, Brand Trust, Brand Loyalty, and Social Media

Table 14.2 shows the relationship among brand trust, brand loyalty, brand image, and social media. Brand trust and brand loyalty were significantly correlated, $r = 0.624$, $p = 0.00$ (which is < 0.05 alpha level). Brand trust also has a significant positive with brand image, where $r = 0.702$, $p = 0$, also with social media, where $r = 0.446$, $p = 0$. Brand loyalty has a significant positive correlation with brand trust, where $r = 0.624$, $p = 0$, and has a significant positive with brand image, where $r = 0.66$, $p = 0$ also with social media $r = 0.501$, $p = 0$. Brand image has a significant positive on brand trust, where $r = 0.702$, $p = 0$, also with brand loyalty, where $r = 0.66$, $p = 0$, and with social media a weak positive, where $r = 0.450$, $p = 0$. Social media has a weakly significantly correlating with brand trust, where $r = 0.446$, $p = 0$, and with brand loyalty, where $r = 0.501$, $p = 0$, and finally with brand image, where $r = 0.430$, $p = 0$. Thus, from the above data, it was evident that each of the independent variables such as brand trust, brand loyalty, brand image, and social media had a significantly positive correlation with one another.

Table 14.2 Correlation matrix among brand image, brand trust, brand loyalty, and social media

		BT	BL	BI	SM
BT	Pearson correlation	1	0.624**	0.702**	0.446**
	Sig. (2-tailed)		0.000	0.000	0.000
	N	300	300	300	300
BL	Pearson correlation	0.624**	1	0.666**	0.501**
	Sig. (2-tailed)	0.000		0.000	0.000
	N	300	300	300	300
BI	Pearson correlation	0.702**	0.666**	1	0.450**
	Sig. (2-tailed)	0.000	0.000		0.000
	N	300	300	300	300
SM	Pearson correlation	0.446**	0.501**	0.450**	1
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	300	300	300	300

14.5.3 Multiple Linear Regression

To predict how social media influences brand image through brand loyalty and trust, a multiple linear regression was used. A significant regression equation was found, $F_{(3,296)} = 137.320$, $p = 0$, with an R^2 of 0.582, as predicted by respondents (Tables 14.3, 14.4 and 14.5).

$$\text{Brand Image} = 0.888 + 0.425 (\text{Brand trust}) + 0.331(\text{brand loyalty}) + 0.051(\text{Social media})$$

where social media, brand trust, and brand loyalty were coded on a scale of 1–5, with 1 indicating complete disagreement and 5 indicating complete agreement with the dependent variable. The influence on social media increases by 0.425 for every unit

Table 14.3 Model summary

Model	R	R square	Adjusted square	R std. error of the estimate
1	0.763 ^a	0.582	0.578	0.33809

Table 14.4 ANOVA table for multiple linear regression

Model		Sum of squares	df	Mean square	F	Sig
1	Regression	47.088	3	15.696	137.320	0.000 ^b
	Residual	33.834	296	0.114		
	Total	80.922	299			

Table 14.5 Coefficients for the model

Model	B	Unstandardized coefficient		Standardized coefficients		
			Std. error	Beta	t	Sig
1	(Constant)	0.888	0.176		5.045	0.000
	BT	0.425	0.046	0.453	9.232	0.000
	BL	0.331	0.049	0.346	6.826	0.000
	SM	0.051	0.030	0.074	1.677	0.095

increase in brand trust, which was shown to be a significant difference, $t_{(296)} = 9.232$, $p = 0.00$. The impact on social media increases by 0.331 for every unit increase in brand loyalty, which was shown to be a significant change, $t_{(296)} = 6.826$, $p = 0$. The influence on social media increases by 0.051 with each unit increase in social media, which was shown to be a significant shift, $t_{(296)} = 1.677$, $p = 0.095$. Brand image was significantly predicted by independent variables such as brand trust, brand loyalty, and social.

14.6 Discussion

The results clearly portray that enhancing the brand image and creating brand trust and brand loyalty and social media content are vital. The brand image can be supported by various social media reviews and ratings. The customer prioritizes the content discussed by the brand in social media and how the company addresses the customer queries and complaints. All of the relationships of its important brand are to consistently deliver its promises and strictly maintain the quality level. In the trust factor, it was found that customer who believes the brand feels the brand never fails their expectations and customer feels the anticipated needs are satisfied and which keeps the customer trusting the brand and which leads to a higher brand image. The brand’s reviews and ratings have a strong impact in creating the image of the brand in the people who are mostly using social media and the internet, trend has changed from word of mouth to electronic word of mouth (E-WOM) to what people talk about the brand product in social media whether its positive or negative comment, it impacts the brand image of the company, and thus, the company the has responsibility to take care of negative review and take counter-action to avoid negative brand image. In addition to this, the brand has to be active on social media to interact with people and build brand image through its marketing strategy. It is recommended that companies should use social media effectively in building their brand. From the result, it is also found that the frequency of purchases also influences brand trust and brand loyalty. The company can focus on various sales promotion schemes to make their customer repeat their purchases very often. Any changes happening with brand trust, brand loyalty, and social media will surely influence the brand image of the company, and

the company should strategies in a way where all of these variables are taken care of with relative metrics for planning, evaluation, and control.

14.7 Limitations and Future Research

This study has several limitations; firstly, the number of variables used was minimum because the researcher wanted to conduct the study has voluntary sampling method and found the respondents will be hesitant to answer a long questionnaire. Hence, very relevant and important was only added to the instrument variables. Secondly, the sample size can be increased for such contemporary studies, and the researchers had constraints in collecting primary data in post-pandemic situations. Thirdly, the social media variables can be increased, and we can measure how individually these variables are affecting the brand image in a larger way.

14.8 Conclusion

In a more complex business environment, it is very challenging to acquire new customers, and the companies are spending huge financial budgets on various customer retention strategies and technology to drive it. On the other side, building brand trust and brand loyalty among existing customers are becoming key metrics for all the marketing and sales teams of the company. This study will contribute as an insight for the teams to consider factors that play a major role in brand trust, brand image, and social media factors for building a positive brand image. In the post-pandemic business challenges, business operations have put forth many research questions on cost-effective marketing practices to acquire new customers and retain existing customers. Brand image and brand equity are two swords of the company brand-building process. One is important from the customer's viewpoint and another from the company's viewpoint, any positive brand image is always a contributor to higher brand equity. This study focused on adding one new variable of social media reviews, and this can be tested with any established model of brand image to further validate and at various customer segments. Overall future research directions can use the social media positive vs. negative reviews impacting the brand variables and use it appropriately in social media strategy building in creating brand image and brand equity.

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Chapter 15

How Does Star Rating Influence Consumers' Purchase Intention: The Roles of Brand Image and Rating Volume?



Arun Saxena and Diptiman Banerji

15.1 Introduction and Research Questions

The importance of online markets and online marketing is well known to companies. In 2021, retail e-commerce sales in India amounted to ~ 66.76 billion US dollars. This figure is forecasted to grow by roughly 20% per annum over the next years, reaching about 145 billion dollars by 2025.¹

The online retail boom is accompanied by oceans of product or merchant-related information in the form of online catalogs, expert product reviews, and user-generated electronic word of mouth (eWoM). Electronic word of mouth (eWoM) in the form of consumer ratings and reviews has proliferated across the internet marking its presence on social media (ex., Facebook, Twitter), consumer review sites (ex., Yelp, TripAdvisor), e-commerce sites (ex. Amazon, Flipkart, Zomato), and expert product review sites (e.g., NDTV and CNET).

Online shoppers rely on this information when making a purchase decision. By different estimates, 90–93% of consumers read between 1 and 6 consumer reviews and ratings at consumer review sites (Mican and Sitar-Taut 2020) when buying something for the first time (Kaermingk 2022; Pitman 2022; Smith and Anderson 2016). Of these, 70–90% trust online reviews, and over 70% trust merchants based on ratings over 4.0, review volume, credibility, usefulness, and recency.

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¹ <https://www.statista.com/statistics/255359/online-retail-sales-in-india/>. Accessed on December 21, 2022.

However, research indicates that shoppers may not always use this voluminous information effectively on account of a variety of individual factors such as the need for cognition and involvement (Holzwarth et al. 2006; Park et al. 2007), types of products such as search and experience products (Li et al. 2020), and eWoM content-related factors (dealing with conflicting reviews). Online merchants have increasingly adopted star rating (based on an aggregation of individual shopper ratings) and volume of rating (number of shoppers who provided a rating) in their electronic word of mouth (eWoM) systems.

The research shows shoppers use star rating and rating volume as shortcuts to compare and sift through the myriad choices, at least in the initial stage of forming a smaller choice set that shoppers can explore in detail. This research focuses on the shoppers' perception and use of the star rating and rating volume in purchase decision-making. Specifically, we study the influence of star ratings on purchase intention.

Further, another important factor in purchase decision-making is 'brand.' Branding has become a dominant marketing strategy, and brands are known to significantly influence consumers' thoughts and behaviors, even without their conscious awareness. Consumers build relationships with the brand (Fournier 1998), assign a personality to brands (Aaker 1997; Radler 2018), love their brands (Carroll and Ahuvia 2006; Palusuk et al. 2019), and develop loyalty toward brands (Back and Parks 2003; Chaudhuri and Holbrook 2001). Two critical constructs, brand awareness and image, are reported to influence purchase intention. The question is whether brand image mediates the relationship between star rating and purchase intention.

Three questions this study aims to answer are:

1. Does a star rating influence consumers' brand image?
2. Does a star rating influence consumers' purchase intention?
3. Does brand image mediate the star rating and purchase intention relationship?

The volume of rating (also referred to as eWoM volume) is the most studied factor in online shopping along with rating. While rating provides a polarity to the evaluation (e.g., low or high quality), the volume of rating provides credibility to the rating, with higher volume perceived as a more credible rating. Therefore, we evaluate the effect of volume on the relationship of rating with brand image and purchase intention. We propose that ratings with high volume are more influential than those with low volume. Therefore, our next two research questions are:

4. Does the relationship between star rating and brand image depend on rating volume?
5. Does the relationship between star rating and purchase intention depend on rating volume?

15.2 Background and Hypotheses

15.2.1 *Star Rating*

Star rating is the numerical evaluation of a product aggregated from individual buyer ratings. It is commonly measured on a scale of 1 to 5 though other scales have also been used sparingly. It is displayed on top of the product webpage in the form of a number and a visual of filled stars corresponding to the rating.

Star rating (average rating) is used as a search aid (Guan and Lam 2019) or decision aid providing a summary of review sentiments (Al-Natour and Turetken 2020) and even improving the usefulness (Lee et al. 2018; Liu and Park 2015) and credibility (Hong and Pittman 2020) of textual reviews. Star rating, being numerical, is easy to process, reduces information asymmetry (Viglia et al. 2016), provides the needed information diagnosticity (Filieri 2015), and helps build trust in user-generated content (Flanagin and Metzger 2013). Star rating is widely employed as a heuristic cue (De Pelsmacker et al. 2018; Park and Nicolau 2015) that individuals use to reduce cognitive load when they lack the motivation and ability to process detailed information for decision-making.

Scholars report that the star rating influences shoppers' perception of product quality (Flanagin et al. 2014) and others' satisfaction with the product (Engler et al. 2015). It improves consumer trust in the offline merchant (Zhang and Wang 2021), reduces perceived risk in the purchase (Gavilan et al. 2019; Wang et al. 2016), and improves perceived value (Noone and McGuire 2014) and satisfaction (Kostromitina et al. 2021). Product ratings positively affect purchase intention (Surjandy et al. 2021). Scholars also find a significant correlation between ratings and prices (Zimmermann et al. 2018; Srivastava et al. 2021; Hu et al. 2019) and ratings and sales (Chevalier and Mayzlin 2006; Fang et al. 2016; Ye et al. 2009).

The rating affects the impact of extremely negative reviews (Filieri et al. 2021). The congruence of aggregated ratings and individual reviews affects consumers' post-purchase evaluation (Liu et al. 2019). Rating and its variance influence different motivations in shoppers (Gasimli et al. 2020).

15.2.2 *Rating Volume*

Rating volume (number of ratings) is the number of users rating the product. It reflects the product's total number of users (or frequency) and, therefore, its popularity.

The findings on the influence of volume are mixed. While one stream of literature reports a significant influence of volume on purchase intention (Park et al. 2007; Park and Kim 2008; Yang et al. 2016), the other finds no influence of volume on purchase intention (Hajli, 2019). Individual factors such as involvement (Lee et al. 2008;

Mahapatra and Mishra 2017; Park et al. 2007; Park and Lee 2008), product-related factors such as product category (Kordrostami et al. 2021), and product attributes such as search and experience attributes (Park and Lee 2009; You et al. 2015) explain these contradictions.

15.2.3 *Theories in Use*

Multiple theoretical perspectives support the influence of star rating and rating volume on consumer decision-making. First, star rating has a ‘primacy effect’ by being presented before detailed product information and textual reviews (Murphy et al. 2006). The primacy effect leads to consumer judgments and future actions anchored to the information presented first. We extend the argument to propose that a star rating displayed on top of a product webpage will exhibit a primacy effect.

Second, the number of ratings (volume) acts as a ‘social proof’ (Cialdini 2021), signaling others that it is the right thing to do. It exerts an informational social influence (Deutsch and Gerard 1955) via individuals’ desire to be correct about their world perceptions. Shoppers trust this majority opinion more than objective facts (Chaiken et al. 1989), perceive less risk in the transaction (Ba and Pavlou 2002), and feel more confident in adding the product/brand to their consideration set.

Third, two persuasion theories, namely the elaboration likelihood model (ELM) and the heuristic-systematic model (HSM) (Chaiken et al. 1989), inform on the individual and situational factors that influence the adoption of rating in purchase decision. Based on these theories, shoppers low on motivation (need for cognition and involvement) and low on abilities (cognitive resources) would depend more on rating than reviews. In this context, star rating as a summary numerical evaluation acts like a peripheral cue or heuristic (low level of elaboration) that shoppers with low purchase involvement and ability to process a large amount of information used in decision-making.

15.2.4 *Brand Image*

Brand image is consumers’ beliefs about the attributes and benefits of a particular brand held in memory through brand associations (Keller 1993). Consumers hold product-specific (e.g., beliefs about toothpaste, laptop, and hotel will be different) and high-level generic associations (e.g., overall perceptions about the quality, value, or uniqueness) about the products and brands. Consumers may hold these high-level brand associations even without having experienced the brand (Dillon et al. 2001). Consumers use high-level associations as heuristics to evaluate products when they lack the motivation and ability to acquire detailed attribute-level brand knowledge (elaboration likelihood model—Cacioppo and Petty 1984; heuristic systematic processing—Chaiken et al. 1989).

Brand image is an important construct in the marketing domain with influence on a vast number of other brand constructs: brand identity and brand attitude (Wu et al. 2011), brand personality (Hosany et al. 2006), brand love (Rageh Ismail and Spinelli 2012), and brand trust (Esch et al. 2006). Scholars also report the significant influence of brand image on consumer perceptions: (1) perception of product quality (Jacoby et al. 1971), (2) perceived value, (3) product choice, (4) purchase intention, (5) satisfaction (Esch et al. 2006), and (6) willingness to pay a premium.

The key antecedents of the brand image include brand communication and awareness. Brand communication directly affects brand image and raises brand awareness essential to brand image formation in the consumers' mind. We propose that star rating is a form of brand communication through which consumers form various brand associations, as discussed in the star rating section before.

15.2.5 Purchase Intention

According to the theory of reasoned action, the intention is a vital predictor of behavior together with attitudes and subjective norms. The intention has been defined as 'a willful state of choice where one makes a self-implicated statement as to a future course of action.' Scholars report an average intention-behavior correlation of 0.53.

15.2.6 Hypotheses and Conceptual Model

15.2.6.1 Star Rating and Brand Image

The literature is scant on the star rating and brand image relationship. A single study in our search results reported that hotel brand image (measured as hotel reputation) moderated the relationship between hotel star rating and consumer booking intention (Casado-Díaz et al. 2017).

The star rating is an aggregate of individual product ratings. Based on the discussion in Sect. 2.1, we propose that individual product ratings are evaluations of associations shoppers hold about the attributes of or benefits from the product, such as quality, design, perceived value, and trustworthiness. So, we propose that star rating acts as crowd-sourced brand communication.

Brand communication, including advertising and social media, is well known to influence brand image (Kovács et al. 2022; Pachucki et al. 2022; Schivinski and Dabrowski 2015). Brand image mediates the relationship between brand communication and brand preference (Gómez-Rico et al. 2022). Based on this discussion, we hypothesize:

H1: A high (versus low) star rating leads to a more positive (versus negative) brand image.

In this research, we investigate if a higher star rating leads to a more positive brand image regarding generic brand associations such as quality, reliability, and performance.

15.2.6.2 Star Rating and Purchase Intention

The adoption of online purchasing has been extensively studied using the belief-attitude-intention framework (Ajzen 1991), which links beliefs, attitudes, and behavioral intentions (Izogo and Jayawardhena 2018; Limayem et al. 2000; Mainardes et al. 2020).

Based on this framework, we propose that brand associations (beliefs) influence consumers' purchase intention by shaping their attitude toward the brand (brand image). We hypothesize that star ratings will directly correlate with purchase intention. The literature supports this relationship (Casado-Díaz et al. 2017; Cheng et al. 2022; Flanagan et al. 2014; Keh et al. 2015; Siddiqi et al. 2020). Our second hypothesis is:

H2: A high (versus low) star rating leads to greater (versus lesser) purchase intention.

15.2.6.3 Brand Image and Purchase Intention

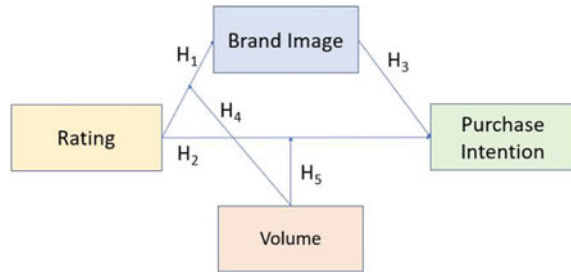
Brand image is known to influence purchase intention via functional and symbolic brand associations (Aghekyan-Simonian et al. 2012), attributes, benefits, and personality associations (Bian and Moutinho 2011), and functional and affective hotel brand associations (Lien et al. 2015; Reza Jalilvand and Samiei 2012; Wu et al. 2011). Even brand names influence purchase preference (Laforet 2011). Therefore, we propose that a brand image composed of functional and affective generic brand associations will influence purchase intention.

We hypothesize:

H3: A positive (versus negative) brand image leads to a greater (versus lesser) purchase intention.

15.2.7 Role of Volume

Rating volume (volume) is the total number of customers who rated the product in an eWoM system of a website. Rating volume has two effects. Consumers relate volume to the product's popularity; that is, consumers perceive brands with a higher volume of ratings as selling more than other brands. Social influence theory explains that higher rating volume (numerical dominance) signals greater correctness of the expressed opinion (Baker and Petty 1994) and has a greater persuasive effect on

Fig. 15.1 Conceptual model

consumers' beliefs and attitudes (Asch 1956). Rating volume influences the credibility of the rating itself (Flanagin and Metzger 2013) and its persuasiveness. The social influence effect can be strong enough to lead to herd behavior (Chen 2008) or bandwagon effects (Wu and Lin 2017). Scholars also report that volume has a positive relationship with rating credibility (Fan et al. 2013; Hong and Pittman 2020) and purchase intention (Doh and Hwang 2009; He and Bond 2015; Park et al. 2007; Sher and Lee 2009).

Based on this, we hypothesize:

H4: Rating volume will moderate the relationship between star rating and brand image such that a higher volume will strengthen the relationship.

H5: Rating volume will moderate the relationship between star rating and purchase intention such that a higher volume will strengthen the relationship.

The final conceptual model is presented in the figure (Fig. 15.1).

15.3 Method

15.3.1 Experiment Design

We propose to use a 2 (star rating: low and high) \times 2 (volume: low, high) between-subjects factorial experiment design that would be run online. In this study, the self-selected participants from a large, selected pool were randomly assigned to one of the four stimuli (one for each experimental condition). The following sections describe the stimulus development.

15.3.2 Stimulus Development

The context of this study would be a wireless computer mouse with a relatively less-known brand 'Quantum' to ensure that online shoppers are familiar with the product, the brand awareness effect is minimized, and the relatively low price (< \$10) does

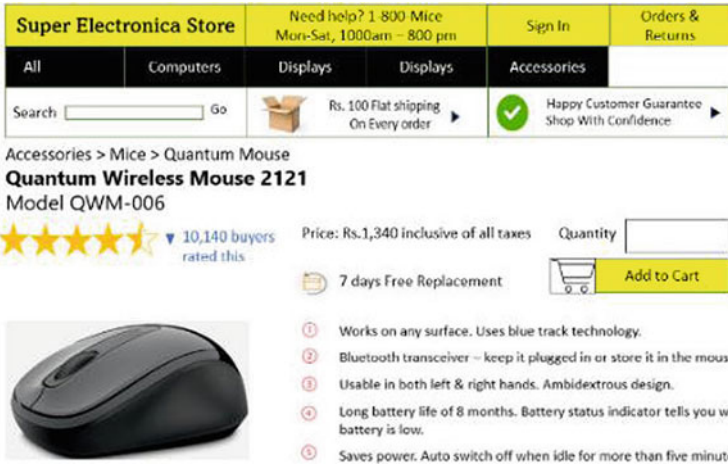


Fig. 15.2 Sample product page stimulus

not impact the natural involvement level of the participants. A pretest would be conducted to verify the assumptions.

Star rating will be manipulated using two rating levels (low and high) determined from inspection of rating distribution for computer mice at a leading e-commerce website and pretesting the selection. The low and high levels of volume will be determined similarly.

A product webpage resembling the typical product webpage at a leading e-commerce website will be used as a stimulus (Fig. 15.2).

15.3.3 Procedure

The study would be conducted online with the questionnaire flow starting with the informed consent followed by the questions on demographics and random presentation of one of the four experimental stimuli. The stimulus presentation will be followed by questions related to brand image and purchase intention based on the star rating and volume displayed in the stimulus. Manipulation and attention check questions will be presented at different points to ascertain that the manipulation was working as desired and that the participants were paying attention to the questions.

15.3.4 Measures

The measures for the two dependent variables, brand image and purchase intention, will be adopted from Martínez Salinas and Pina Pérez (2009) and Chung et al. (2018),

respectively. Both these measures have Cronbach's alpha of more than 0.7 and are widely cited.

15.3.5 Results

ANCOVA analysis was used to test hypotheses 1 and 2; linear regression was used to test hypothesis 3, and Process model 1 was used to test hypotheses 4 and 5. Age, gender, education, and income were used as covariates in the analysis. The results of the analysis are presented in Table 15.1.

Table 15.1 Findings from the study

Hypothesis	Analysis method	Finding
H1: star rating has a positive relationship with brand image	ANCOVA analysis	Supported The rating has a significant main effect on the brand image [$F_{(1,205)} = 390.18, p < 0.001$]
H2: star rating has a positive relationship with purchase intention	ANCOVA analysis	Supported The rating has a significant main effect on the purchase intention [$F_{(1,205)} = 303.64, p < 0.001$]
H3: star rating has a positive relationship with purchase intention	Linear regression	Statistically significant overall regression ($R^2 = 0.84, F_{(5,200)} = 216.44, p < 0.001$). Brand image significantly predicted purchase intention ($\beta = 1.14, p < 0.001$)
H4: rating volume will moderate the relationship between star rating and brand image such that a higher volume will strengthen the relationship	Process model 1	A significant interaction between rating and volume ($b = 0.000, p < 0.05, \Delta R^2 = 0.007$) A significant direct effect of rating on the brand image ($b = 0.71, p < 0.001$)
H5: rating volume will moderate the relationship between star rating and purchase intention such that a higher volume will strengthen the relationship	Process model 1	A significant interaction between rating and volume ($b = 0.000, p < 0.05, \Delta R^2 = 0.01$) A significant direct effect of rating on purchase intention ($b = 0.81, p < 0.05$) A significant direct effect of education on purchase intention ($b = -0.13, p < 0.05$)

15.4 Discussion

The purpose of this study was to test the causation effect of star rating and volume on brand image and purchase intention. The study found that the effect of rating on brand image and purchase intention is higher at high volume than at low volume. This implies that higher volume provides greater ‘social proof’ to the rating leading to its stronger influence on outcome variables. The study also found that the effect reverses at low ratings. This is intuitive because a high volume of low ratings will harm the brand image and purchase intention.

The findings add insights based on primary data to the large volume of studies in this area, mainly based on modeling and data mining using secondary data. Studies explaining star ratings’ influence on purchase intention are scarce. Overall, the findings from this study help us understand (1) the consumers’ reliance on star ratings in purchase decision-making, (2) star ratings influence consumers’ brand image and purchase intention, and (3) moderating effect of rating volume on the star rating relationships.

15.5 Managerial Implications of This Research

This research would provide evidence of how consumers use star rating and volume and how it impacts brand image and purchase intention. The findings should help marketers devise strategies to boost brand image in different rating conditions (low and high) and volume (low and high). For example, for a newly introduced product, with a low ratings volume, marketers can incentivize buyers to rate the product, leading to rating volume growth. In the event of a low star rating for a product, marketers could invest in building the brand image, compensating for the effect of a low rating.

15.6 Limitations and Future Directions

This study is based on a low-involvement, low-price product that could be a search or experience product for consumers with different involvement levels. The effect of the volume of ratings is predicated on informational social influence.

Individual, product, and situational factors influence the role of rating in consumer purchase decision-making. Research is scant across these factors. We discuss individual factors, followed by product and situational factors.

The research on what consumers perceive from rating is scant, with a handful of studies focusing on product quality as one of the many possible perceptions consumers might form from rating. So, more research is required in this area. Further,

it will be useful to understand consumer attitudes toward ratings. Consumers' attitudes toward rating would depend upon their confirmation of expectancies from the star rating. Therefore, rating attitude determines to what extent they consider ratings in their purchase decisions.

Further, consumers with a high tendency toward informational social influence would exhibit greater rating influence. So, further studies are required on the moderating role of informational social influence on the relationship between rating and the outcome variables. Finally, individuals' need for cognition impacts their drives their involvement affecting their information collection, processing, and decision-making behavior. More studies on how the need for cognition and involvement influence ratings would advance understanding in the area.

We expect that consumers' dependence on the rating will vary across product categories, for example, search and experience products and low and high-price products. For example, for products rich in search attributes where available product information can be objectively evaluated, consumers can relate it to the rating leading to a greater influence of rating on their behavior. On the other hand, the influence of summary numerical ratings on consumer behavior would be muted for 'experience' products. Similarly, we expect the rating influence for 'high-price' products to be lower than for 'low-price' products. These factors require further investigation.

Finally, purchase situations can influence consumers' natural purchase behavior. For example, under time pressure, consumers may depend on ratings as a heuristic cue, helping them make a quick decision. Further experiments with these variables will help develop the complete picture.

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Part IV
Contemporary Topics

Chapter 16

Workplace Bullying and EVLN Outcomes: A Study on the Role of Climate for Conflict Management



Krishna Arathi, Devi Soumyaja, and R. Rahul Thampi

16.1 Introduction

People are social beings and want interaction and social learning is the primary form of learning, just as word of mouth advertising is the highest form of advertising. Stephen R. Covey

People learn through their observations and perceptions acquired through interactions with others. According to social learning theory, observing how others conduct themselves in a given context and their outcomes allow individuals to learn appropriate behaviour (Bandura 1977). Particularly when making decisions with high consequences, they actively learn and form perceptions. An example of such a situation is adopting coping strategies in highly stressful situations, such as workplace bullying.

When bullying occurs at work, employees are harassed, offended, or excluded, or their work performance is adversely affected over long periods of time (Einarsen et al. 2011). Research has shown that employees respond to adverse workplace conditions in four ways, referred to as EVLN responses (Hirschman 1970; Rusbult et al. 1988; Farrell 1983). Specifically, workplace bullying increases the likelihood of employees leaving their jobs (Exit-E), neglecting their responsibilities (N), and decreasing their Voice (V) and Loyalty (L) (Rai and Agarwal 2019). These coping strategies may be influenced by their social learning.

Employees may form perceptions about conflict management procedures and the fairness and predictability of their interactions with managers (Climate for conflict management (CCM), Rivlin 2001) through social learning, which can impact how

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they cope. Previous studies support our argument that CCM can influence employees' responses to workplace bullying (Einarsen et al. 2018). However, this study extends the social learning theory (Bandura 1977) and contends that victims of bullying adopt these coping strategies after studying how the organisation handled previous disputes. The current study intends to explore how CCM affects EVLN responses to workplace bullying, which has not been examined in the existing literature.

The study is conducted among academic faculty members in India. Therefore, unlike previous studies, we are examining the effect of CCM in a different organisational context where it lacks a personnel department to monitor and evaluate the implementation of policies and procedures. It was understood that very few colleges in India appreciate the requirement of personnel departments at their workplace. The majority of disputes and complaints in those colleges are handled by members of the management or by a permanent or temporary committee. It will be interesting to learn how employees perceive the procedures and their fairness in dispute handling without any permanent system like a personnel department.

The study makes a few important contributions. Many studies have provided insights into employees' coping strategies in workplace bullying situations, but few have investigated whether and why the coping behaviour is a socially learned behaviour as a result of observing others and its consequences at work. Thereby, the study contributes to the existing literature by exploring the role of CCM in adopting coping strategies (EVLN) in academic bullying. More specifically, we provide insight into how organisations which can regulate employees' coping mechanisms when faced with workplace bullying, including reducing employee exit and neglect and enhancing employee loyalty and voice through a better conflict management climate. Additionally, the study used a scenario-based method to examine mobbing like bullying in academia (Keashly and Neuman 2013) and the organisational context, which lacks an established system or procedures to implement the policies. Figure 16.1 shows the research model for the study.

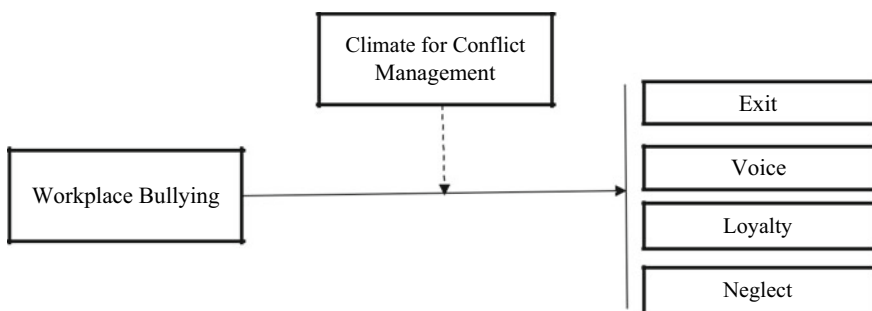


Fig. 16.1 Research model

16.2 Theoretical Framework and Hypothesis Development

Einarsen et al. (2011) state that bullying occurs when someone is harassed, offended, socially excluded or their performance is negatively impacted. In addition, Einarsen et al. (2011) describe bullying as recurring (e.g. weekly) negative acts over a long period (e.g. six months). Power disparities are also associated with workplace bullying (Einarsen et al. 2011). Power disparities in academia are often influenced by many factors, including organisational hierarchy, peer review, collegial decision-making, and expertise.

Bullying can affect victims in multiple ways, negatively impacting their mental and physical well-being and their feelings about his/her job, resulting in decreased job satisfaction (Lovell and Lee 2011; Vie et al. 2011; Valentine and Fleischman 2017). Employees may choose to respond to their decline in job satisfaction by taking one of four actions (Hirschman 1970; Rusbult et al. 1982; Farrell 1983); they may leave (E), engage in a prosocial voice (V), demonstrate loyalty to the organisation (L), or act negligently (N). Farrell (1983; refer also Rusbult et al. 1988) classified the four responses of employees along two dimensions: (1) active (exit or voice) and passive (loyalty or neglect) and (2) constructive (pro-organisational; voice or loyalty) and destructive (anti-organisational; exit or neglect). We argue that these coping strategies may be a learned behaviour through social interactions and observations at the workplace. Social learning theory supports this argument, as outlined below.

16.2.1 Social Learning Theory

Social learning theory (Bandura 1977, 1986) suggests that a person's social behaviour is acquired through direct experience or observation. In other words, individuals determine the appropriateness and acceptability of behaviour through social learning. The theory emphasises the power of social interaction and social context in the learning process (Vygotsky 1978). Studies have shown that in abusive contexts, individuals observe and attend to those around them, judge the observed behaviours against the consequences received, and then mimic behaviours deemed to have positive consequences (Mawritz et al. 2012). Social learning acquired through social interaction and from the social context plays a crucial role in adopting coping mechanisms in abusive situations, such as workplace bullying.

An individual may be able to learn about appropriate coping strategies in their workplace by observing how their manager or organisation handled similar conflicts in the past. An employee's perception of the effectiveness and fairness of the organisation's handling of interpersonal conflicts is referred to as Climate for Conflict Management (CCM, Rivlin 2001). Our argument is that employees' perception of CCM is formed through social learning, which can affect their behaviour. Studies have shown that CCM can influence the outcomes of bullying (Einarsen et al. 2018;

Najam et al. 2018). Suppose the employees learned a fair perception from their own previous experiences or those of others in similar situations. In that case, the employees may involve in constructive behaviours like voice and loyalty. On the other hand, if the learned perception is unfair through observing others' negative consequences in displaying constructive behaviour or from their own experience, the employee may tend to engage in destructive behaviours in workplace bullying situations. For example, the employees observe that those voicing is labelled as 'troublemakers' or there is no fair involvement of management in solving the issue despite being loyal to the organisation. In that case, the employees may be more likely to choose destructive behaviours. Considering each coping strategy separately, we can examine how CCM influences workplace bullying.

16.2.2 Workplace Bullying and Exit

Exit behaviours encompass movements within an organisation (e.g. changing jobs) and outside the organisation (e.g. leaving the job) and cognitive activities that precede these movements (e.g. thinking about transferring) (Farrell 1983). Employees subjected to negative events and stressors at work, like workplace bullying, are more likely to exhibit high exit behaviours (Skogstad et al. 2011; Coetzee and van Dyk 2017). In line with these studies, we also propose that the employee may choose to exit in a dissatisfying context like workplace bullying.

Drawing from social learning theory (Bandura 1977), we contend that the employees may learn from their previous experience or observe the consequences of others and form perceptions about dispute resolution procedures or conflict management procedures of the organisation. A fair perception of CCM (high CCM) may induce the perception of having positive consequences about displaying constructive behaviours rather than leaving the organisation. Conversely, an unfair perception of CCM (low CCM) may enhance the feeling of futility associated with displaying constructive behaviour, and they may leave the organisation. The victims of workplace bullying are less likely to exhibit exit behaviours under high CCM conditions than under low CCM conditions. Therefore, we hypothesise that:

H1: CCM moderates the relationship between workplace bullying and exit such that the strength of the relationship is weaker under conditions of high CCM compared to conditions of low CCM.

16.2.3 Workplace Bullying and Voice

Voice behaviour refers to unsolicited behaviour focused on offering constructive suggestions and challenges. A person's voice can enhance his or her status within an organisation and can have an impact on interpersonal relationships. Employees' practice voice when they feel it will be low-risk and effective, and their supervisor or

management supports them (Noelle-Neumann 1991). Hence, voice involves a lot of cognitive processes when making a deliberate decision (Kish-Gephart et al. 2009). Employees may not engage in voice in a more risky, resource-depleting context like workplace bullying (Rai and Agarwal 2019). In line with this literature, we also propose that employees are less likely to engage in voice behaviour in workplace bullying contexts.

Employees who perceive a fair CCM (high CCM), acquired through social learning (Bandura 1977), may feel low risk and effective in voicing their opinions at work. The risk of bullying may be mitigated by the perception of supportive, fair, and predictable conflict management procedures and interactions with management. Therefore, we contend that a high CCM condition can foster employee voice behaviour in workplace bullying contexts. We hypothesise:

H2: CCM moderates the relationship between workplace bullying and voice behaviour such that the strength of the relationship is stronger under conditions of high CCM compared to conditions of low CCM.

16.2.4 Workplace Bullying and Loyalty

Loyalty is passive and constructive in nature, where individuals wait for the circumstances to improve and continue their work and support the organisation (Farrell 1983; Rusbult et al. 1988). Employees withdraw their loyalty in response to adverse workplace experiences as a primary response (Kiazad et al. 2014). Especially, in workplace bullying contexts, employees tend to be less loyal towards the organisation (Rai and Agarwal 2019). In line with this literature, we also propose that employees are less likely to show loyalty in workplace bullying contexts.

Employees' perception of a fair CCM (high CCM), acquired through social learning (Bandura 1977), may foster their loyalty towards the organisation. Therefore, even in workplace bullying contexts, the employee may be ready to wait for the situation to get better and continue their work. Hence, CCM may moderate the relationship between workplace bullying and loyalty. Hence, we hypothesise that:

H3: CCM moderates the relationship between workplace bullying and loyalty such that the strength of the relationship is stronger under conditions of high CCM compared to conditions of low CCM.

16.2.5 Workplace Bullying and Neglect

Neglect refers to situations when conditions deteriorate passively, and it often occurs due to reduced attention, chronic lateness, increased absence, personal use of company time, or an increased error rate (Rusbult et al. 1988). The act of neglect is considered as a form of behavioural strain or a negative behaviour exhibited in response to perceived stressors at work (Spector and Jex 1998). Workplace bullying

is a critical stressor resulting in employee neglect (Rai and Agarwal 2019). In line with these studies, we argue that workplace bullying is related to employee neglect behaviour.

The employees may not perceive the same level of stress associated with bullying when they observe and learn about supportive and fair handling of disputes in the past (SLT, Bandura 1977). Thus, the learned perception may influence the victim's behaviour as neglect. Additionally, a fair perception of CCM (high CCM) may induce the perception of having positive consequences about displaying constructive behaviours rather than neglecting their job. In other words, in high CCM conditions, the victims of workplace bullying are less likely to exhibit neglecting behaviours. Therefore, we hypothesise that:

H4: CCM moderates the relationship between workplace bullying and neglect such that the strength of the relationship is weaker under conditions of high CCM compared to conditions of low CCM.

16.3 Research Methodology

Cooper et al. (2020) suggested using randomised experiments in vocational behaviour studies to eliminate CMV and endogeneity (Antonakis et al. 2010). Following the recommendation, the hypotheses proposed in our study were tested through an experiment.

Studies suggested that scenario-based experiments help to analyse situations with specific conditions challenging to duplicate (Pilling et al. 1994). Consequently, we chose this method to highlight academic bullying involving multiple actors that are difficult to replicate.

16.3.1 *Participants of the Study*

As part of our experiment, we invited faculty members from several Indian universities. A total of 172 university faculty members were voluntarily participated in the experiment, most of whom were between the ages of 25 and 45 (51% of women).

16.3.2 *Research Design*

This study explored the effects of workplace bullying and CCM on EVLN out using a 2 (bullying vs. no bullying) \times 2 (high CCM vs. low CCM) between-subjects design. The dependent variables were exit, voice, loyalty, and neglect (EVLN). After presenting the vignettes, participants answered questions regarding the manipulation check (workplace bullying and CCM) and dependent variables (EVLN).

16.3.2.1 Vignette (Scenario) Development

As per the recommendations of Rungtusanatham et al. (2011), we used the real-life experiences of twenty college teachers in developing the bullying scenario (pre-design phase). The scenario was developed and tested using expert panel validation, realism check, and pilot study. A teacher's experience of being bullied at work for the past six months was used to illustrate the workplace bullying scenario. On the other hand, the no-bullying scenario was described as a harmonious working environment with only one conflicting incident. To develop the 'No bullying' scenario, the negative acts presented in the workplace bullying scenario were reversed and reframed positively, ending with a conflicting or disagreeing situation for continuity.

We used the adapted version of the Conflict Management Climate Scale proposed by Rivlin (2001) in the experiment. When the CCM context is high, there are clear procedures and fair implementation; when the CCM context is low, there are no clear procedures.

16.3.2.2 Manipulation Checks

This study used Negative Act Questionnaire-Revised (NAQ-R; Einarsen et al. 2009) to examine workplace bullying manipulation (Cronbach's alpha = 0.93). We found a significant difference between bullying and non-bullying scenarios ($F = 6.68, p < 0.01$), which indicates effective manipulation.

We used an adapted version (used by Einarsen et al. 2018) of the measurement scales of CCM (Rivlin 2001) for the manipulation check (Cronbach's alpha = 0.88). The results demonstrated a significant difference between high and low CCM scenarios ($F = 6.16, p < 0.01$), indicating effective manipulation.

16.3.2.3 Dependent Measure

The scenario technique was used in our research to assess exit, voice, loyalty, and neglect. Participants were asked to read two scenarios, as described previously. Imagining themselves in the position of the college teacher described in the situation, they were asked to denote how likely they would be (from 1 = not likely to 5 = very likely) to show each response option. The study used the 12 items-adapted scales (Hagedoorn et al. 1999) of EVLN used by Knoll and van Dick (2013). Examples of items are: "I would intend to quit" (exit); "I would address the problem even if speaking up entailed disadvantages," (voice); "I would trust the organisation to solve the problem without my help" (loyalty); "I would put less effort into my work than is expected of me" (neglect).

16.4 Hypothesis Testing and Findings

Each variable is presented with mean, standard deviation, and sample size in Table 16.1. Multivariate analysis of variance (MANOVA) was used to test the hypotheses (H1, H2, H3, and H4). First, we examined the main effect of workplace bullying on the outcome variables (EVLN). The findings indicated a significant main effect of workplace bullying on exit (Wilks' $\Lambda = 0.812$, $F(168) = 4.643$, $p < 0.05$), voice (Wilks' $\Lambda = 0.812$, $F(168) = 14.928$, $p < 0.01$), loyalty (Wilks' $\Lambda = 0.812$, $F(168) = 4.803$, $p < 0.05$), and neglect (Wilks' $\Lambda = 0.812$, $F(168) = 19.277$, $p < 0.01$). It indicated that bullying/no bullying differences explained significant variation in EVLN outcomes.

The results indicated that the interaction of workplace bullying and CCM was significant in predicting exit (MCCM high = 2.52, MCCM low = 3.07, $F(1168) = 8.201$, $p < 0.05$); thus, the results supported H1. The interaction effect was significant for predicting voice (MCCM high = 3.70, MCCM low = 3.102, $F(1168) = 16.178$, $p < 0.05$), supporting H2. The interaction effect was significant for loyalty (MCCM high = 3.37, MCCM low = 2.86, $F(1168) = 10.130$, $p < 0.05$) and neglect (MCCM high = 2.0, MCCM low = 2.41, $F(1168) = 9.490$, $p < 0.05$), thereby supporting hypotheses 3 (H3) and 4 (H4), respectively.

Consequently, we observed that workplace bullying had a weaker effect on exit and neglect for victims in organisations with a fair dispute resolution procedure (CCM). Additionally, we found that the interaction effect of workplace bullying and CCM can improve the effect of workplace bullying on voice and loyalty. The interaction results are given in Table 16.2 and the interaction graphs are given in Fig. 16.2.

Table 16.1 Means, sample size and standard deviations by condition

Measured variables	WB				No WB			
	CCM manipulation				CCM manipulation			
	Low ($n = 43$)		High ($n = 43$)		Low ($n = 38$)		High ($n = 42$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Exit	2.81	1.15	2.46	1.021	2.32	1.16	1.60	1.55
Voice	2.81	0.825	3.58	0.53	3.18	0.796	3.38	0.62
Loyalty	2.57	0.914	3.35	1.10	3.13	1.16	3.40	1.13
Neglect	2.67	1.097	2.34	0.93	2.16	0.93	1.60	0.744

n Sample size, *M* Mean, *SD* Standard deviation

Table 16.2 Interaction effect

WB × CCM			
Dependent variables	<i>F</i>	Sig.	Partial eta squared
Exit	8.20	0.005	0.047
Voice	16.18	0.000	0.164
Loyalty	10.13	0.002	0.057
Neglect	9.49	0.002	0.053

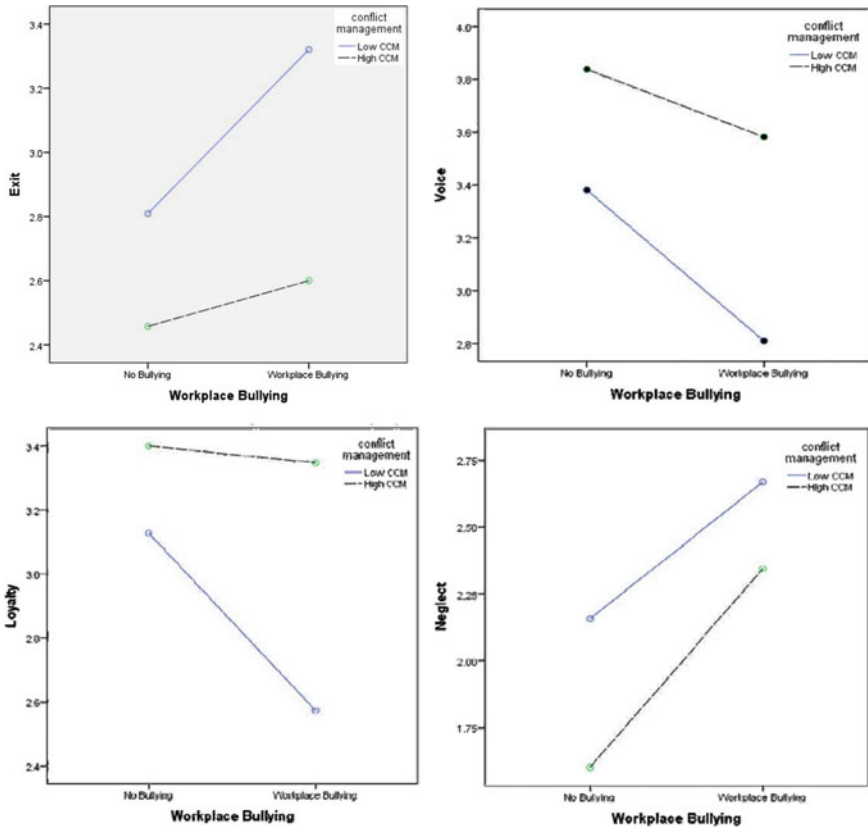


Fig. 16.2 Interaction effects of workplace bullying and CCM

16.5 Discussion: Theoretical and Practical Implications

Using social learning theory, we investigated victims’ choices regarding EVLN outcomes within a context of perceived fairness of CCM (high CCM and low CCM). The results showed that when the victims of workplace bullying perceive CCM

fairly, they are less likely to leave the workplace and neglect their work. Additionally, victims of workplace bullying will be more loyal and voice their opinions if they have a fair perception of CCM. The study emphasises the importance of having a fair and predictable CCM in higher education institutions.

In response to workplace bullying, this study is one of the very few attempts to assess EVLN outcomes. Rai and Agarwal have previously explored the bullying–EVLN relationship among Indian managerial employees. The current study extends Rai and Agarwal (2019) by demonstrating a possible moderator (CCM) that affects organisational outcomes more favourably for management and the organisation. By doing this, we respond to their call to uncover variables that can reduce bullying's negative effects.

The study supports Einarsen et al. (2018) by showing the role of CCM as a moderator in determining outcomes of workplace bullying. Specifically, CCM negatively impacts bullying–exit (E) and bullying–neglect (N) relationships while positively impacting bullying–voice (V) and bullying–loyalty (L) relationships. Therefore, the study contributes to the literature on influencing the coping strategies of victims in workplace bullying contexts.

Furthermore, the current study has significant implications for improving workplace bullying management practices on top of these theoretical advancements. The study adds that a fair and predictable CCM can shape the victims' choice of coping with workplace bullying. From this perspective, the management of educational institutions can set standardised practices for solving interpersonal conflicts like workplace bullying. Thus, the management can play a crucial role in shaping the victims' coping strategy, i.e. their choice to exit the company, voice to make a change in their current situation, being loyal to the organisation and wait and finally, neglecting their work, and continuing in their job. Therefore, our study's findings have profound practical implications in prolonged conflicts like workplace bullying.

16.6 Conclusion: Future Research and Limitations

Our study used a scenario-based experimental method to assess the role of CCM in the relationship between workplace bullying and EVLN. In this way, we were able to comprehend the bullying scenario in academics. Experimental studies, however, are limited in their ability to establish external validity, so other methods like surveys or factorial surveys with a larger sample size can be used. In this way, external validity will be improved.

As our study focused on unique conditions in academia, its generalizability to other industries may be limited. By replicating the study, it may be possible to find the peculiarities of bullying in various sectors. Different results may be obtained if there is a personnel department or an anti-bullying law in place.

The relationship between workplace bullying and EVLN could also be mediated/moderated by other variables. The workplace bullying–EVLN relationship may be affected by many variables, including in-group favouritism, perceived voice safety,

emotions, and learned helplessness. Voice non-endorsement, for instance, may occur if the authorities do not listen to the employee or do not act upon their concerns. It may impact their coping strategy. Thus, we still need to explore workplace bullying and EVLN more thoroughly.

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Chapter 17

The Blurred Lines of Cultural Misappropriation as a Form of Business in the Modern World



Parkhi Agarwal

17.1 Introduction

One of the most well-known Indian fashion designers, Sabyasachi, has recently come under fire for alleged cultural appropriation, or rather theft. His latest collection, Wanderlust, was unveiled in association with the Swedish company H&M. The collection, which included saris, allegedly violated some artisan communities' Geographical Indications (GIs). Even with GI tags and other IP protection rules, duplication remains a significant issue, particularly for Indian artisans (Doshi 2021). When work is duplicated through cultural appropriation, the artisan communities are frequently ignored. It is significant to emphasize that companies must use caution when embracing and modifying various cultures. Such exploitation should not be permitted in the name of style and financial gain, and if it is, the artisan communities must be recognized and honored through a variety of channels.

To produce new products, including those from Asian cultures, businesses are looking outside of what is thought of as "mainstream culture." The primary offender is always fashion because designers frequently employ provocative techniques to incorporate elements from many cultures into their designs which kills the novelty and originality of these designs. In today's worldwide society, the line between what is acceptable and disagreeable is very fuzzy. People across the world are wearing these fashion pieces that identify them as members of particular groups around the world without knowing much about the history behind them. Thus, cultural misappropriation is not only a little insensitive practice to several communities by hurting their racial identity, but it can also infringe on various forms of intellectual property protection. Defenders counter that it is not cultural misappropriation at all, but rather cultural appreciation or encouragement, while opponents claim that these new-age

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businesses and designers steal traditional and indigenous designs from original artisans of these designs, which amounts to IP violation. Unfortunately, for firms accused of appropriation, these controversies frequently play out in the media and ultimately result in lawsuits that can dilute or tarnish their brand image. Thus, we are still not clear to what extent this cultural misappropriation is permissible.

There are various pieces of research on cultural misappropriation and how it is detrimental to indigenous communities, but there is a scarcity of research that has examined the ways in which such practice of cultural misappropriation can be removed from the source which can not only benefit the indigenous communities but also benefit the businesses that may want to use some portions of these cultures as a part of modern art and inspiration without violating IP rights of these communities. This research aims to address this issue by investigating the following:

1. What are the risks and challenges for the companies which are using cultural misappropriation as a form of inspiration and what are they to avoid landing in such a situation?
2. To contrast the level of protection afforded to brands via the trademark path with that afforded to brands via geographical indications (GIs), with the hope of identifying any glaring flaws in the latter.
3. How can both the affected communities and the businesses charged with cultural misappropriation mutually co-exist in the current legal system?

This paper is divided into seven different sections. The second section of this paper is dedicated to cultural misappropriation in detail, followed by the third section on the methodology used in this research paper to meet the research objectives. The fourth section is about the discussion and the proposed solution set for the problem. The theoretical, practical, social, and policy implications of the study are discussed in the fifth section. The next section discusses the limitations of this study before concluding the paper.

17.2 Conceptual Background on Cultural Misappropriation: The Perplexing Conundrum that Businesses Must Undertake to Resolve

17.2.1 Cultural Misappropriation

It describes the utilization of items or aspects from the culture of minority group in a way that supports coercion or reinforces stereotypes without disregarding their original meaning or giving credit to their source. Using their attire, dance, and other cultural elements without permission is another example (Cuncic [2022](#)).

Thus, cultural misappropriation is a multifaceted issue as many individuals find it difficult to comprehend and they are even unaware that they are constantly engaging in one. Cultural misappropriation involves five main essentials:

1. Culture.
2. Misappropriation.
3. Cultural deprecation.
4. Appreciation and recognition.
5. Monetary benefit.

17.2.2 Pain Points of Artisan's Communities

Cultural misappropriation involves twofold issues connected to the affected and aggrieved community which are mentioned below.

1. Infringement/misuse/misappropriation of registered intellectual property: At times, these artisans and craftsmen community have the appropriate IP protection for their work of art. Using such cultural elements without consent attracts violation of such rights and legal action can be instigated against these offenders.
2. Deficiency of enough acknowledgment, recognition, and reward, of local artisans. The designs in question display a strong connection with the cultural elements that are picked up without the knowledge of the original owners, whereas in fact there is no such relationship and the products in issue are manufactured digitally rather than utilizing traditional block printing methods.

17.2.3 International Legal Framework

Internationally, various steps have been taken to protect various forms of traditional and cultural expressions including textile, sculpture, painting, etc. Some of them are mentioned below.

1. Berne Convention for the Protection of Literary and Artistic Works (1886).
2. TRIPS Agreement (1994): This agreement compulsorily mandated developing countries to intensify the various forms of IP protection, but it did not mention cultural and traditional elements and expressions.
3. The WIPO-UNESCO Model Provisions, 1982, elaborates on the need to protect expressions of folklore.
4. U.N. Declaration on the Rights of Indigenous Peoples (2007) (Singh 2021).

Based on these conventions and declarations, India has adopted various legislation that protects cultural and traditional elements and expressions which are mentioned below.

17.2.4 Indian Legal Framework

Designers in the fashion business take advantage of many sorts of traditional attire, which is the intellectual property of traditional societies, for fashion displays. In India, there are various laws wherein one can find protection for their cultural designs, but there is no single law that is exclusively meant for the protection of these cultural designs and the rights of their related communities.

1. **GI Act, 1999:** A geographical indication (GI) is a tag placed on a particular product to classify its origin. The product must exhibit the reputation and characteristics of its country of origin. GI is typically registered on goods made over generations by minority and indigenous communities that have a strong reputation worldwide due to their distinctive products. Section 22 of the GI Act, 1999, defines infringement of GIs [The Geographical Indication of Goods (Registration and Protection) Act, No. 48, Acts of Parliament 1999 (India)].

For example, Kashmiri Kahawa, Bikaneri Bhujjiya, Mysore silk, Sangneri Handblock Prints, etc. (WIPO n.d.).

In case of cultural misappropriation of indigenous communities' culture wherein the cultural element has a Registered GI tag over it, then such an instance will be termed as an infringement of GI. The artisans' side may assert that the slightest implication or suggestion of an association with the registered GI is sufficient to establish a case of infringement and that passing off, unfair competition, and colorable imitations may also be relevant in such a case.

2. **Copyright Act 1957:** A few portions of the Indian copyright law, including sections 31A, 38, and 57, which address performer's rights, compulsory licensing, and moral rights, safeguard cultural and traditional elements and expressions. The Copyright Act protects both literary and artistic work. Copyright safeguards the "right to prohibit or allow" certain uses, such as reproduction, adaptation, public communication, and redistribution, as well as the "moral rights of attribution and integrity" [The Copyright Act, § 15(1), No. 14, Acts of Parliament 1957 (India)].
3. **The Constitution of India, 1950:** Protecting minorities' cultural rights is a fundamental right, according to Article 29(1). The rights of minorities, who fall under the purview of this article, have been particularly protected under it, leaving out of its purview the protection of smaller communities that are more susceptible to the threat of exploitation than the more well-known communities. Despite this, the article fails to protect a wide range of communities (The Constitution of India, § 29(1), (India) 1949).
4. **Designs act:** In Section 2(d) of the Designs Act, 2000, the term "Design" is defined. In the context of manufactured goods, the term "design" refers only to the outwardly visible characteristics—the form, configuration, pattern, ornament, or composition of lines or colors whether in two or three-dimensional or in both of the forms by using any industrial process whether manual, chemical, or mechanical—that give the final product its aesthetic value⁴. The protection of the product is only given under this specific act if it is registered under the act [The Design Act, 2000, § 2(d), No. 16, Acts of Parliament 2000 (India)].

Overlap between the protection advanced by the Designs Act and Copyright Act. It is common knowledge that design rights frequently overlap with other forms of intellectual property, such as copyrights. However, unlike patents, which protect inventions that lead to technological advances and functional improvements, design patents only protect the aesthetic features of an item and not its utility.

Copyright in a registered design automatically transfers to the registered proprietor. Since Section 15(1) of the Copyright Act precludes copyright protection for a registered design, a design cannot be protected under both the Designs Act and the Copyright Act at the same time. Once a design has been reproduced more than fifty times by an industrial process, either by the owner or with his license, the copyright in the design will expire even if it has not been registered (The Copyright Act, § 15(1), No. 14, Acts of Parliament, (India) 1957).

17.3 Methodology

This research paper explains the impact of cultural misappropriation on businesses and indigenous communities, by mapping and identifying the risks and challenges involved with misappropriation. To find a solution to this issue, I have used **cased based research methodology** that chalks out various instances wherein these businesses get caught in the gray area between inspiration and misappropriation. To validate my point, I have taken three cases based on which I have identified various risks and challenges, and with the help of it, I have tried to create a problem set to lower the risk of cultural misappropriation. All three cases depict how cultural misappropriation has been diluting the identity of the indigenous communities and how businesses are unable to draw a line between taking inspiration from cultural elements and stealing the elements without giving acknowledgment. All three cases have sparked controversy and the question of misappropriation throughout the world, and thus, it was important to understand the small nuances of each case.

17.3.1 *Marc Jacob's 2017 Spring Collection*

During a runway show models were sent down the runway sporting wigs as a form of prop that resembled dreadlocks which were taken from African Culture. All the models were seen sporting different candy-colored dreadlocks as a part of the show which came out to be insensitive to a lot of spectators as well as people belonging to the African culture. While for some, it may just be a particular haircut or a hairstyle, but for others, it holds spiritual and political significance, representing their cultural or racial individuality. This particular hairstyle is used in the African region as a form of protective hairstyle for frizzy hair. These hairstyles are not merely lovely

accessories for white people to experiment on whenever they feel like it since they are inseparably related to underprivileged cultures who have suffered oppression for wearing them. As a result, it appears that brands are simply adopting content they deem intriguing without taking into account its potential impact on a larger audience (Cadogan 2017).

It is not cultural appropriation when Black people scream that they are the only ones wearing braids. It implies that you are aware of the culture and you are taking that cultural inspiration from it. The practice of having one's hair tied back originated as a representation of one's political and spiritual convictions, but it has now spread to represent a variety of other concerns. A person's ethnic or racial identity may be strongly associated with their hairdo. Some individuals don dreadlocks because they find the look beautiful, while others have done the look to identify with a specific social and class standing. In response to the allegations posed, he stated a careless and irresponsible comprehension of power and history by stating that "women of color also straighten their hair." Because they were viewed as improper, messy, and unsightly if they sported their hair curled and naturally, Black women had always worn their hair straight (Smith 2016).

17.3.2 Sabyasachi x H&M; Linkage to Sanganer

Sanganeri hand block printed textiles, which are about 500 years old, are distinguished by their delicate flower designs in various colors. In December 2008, an application for GI registration was filed for Sanganeri Handblock print, and after rigorous scrutiny, concerning its originality and uniqueness, the GI certificate was granted to the Sanganeri Handblock printing textile in 2010. A variant of these block prints was given a new look in August 2021 in a collection that shattered the internet. It was sold out within a few minutes. The collection was called "Wanderlust," which featured the renowned Bengal Tiger insignia on everything from T-shirts to sarees, which was a joint effort between Sabyasachi Mukherjee, the famous Indian designer and king of bridal couture, and Sweden's Multinational company H&M. The collection was available in several countries including India, Japan, Sweden, France, etc. Below is a glimpse of this collection. The female collection featured kaftans, saris, dresses, etc., and the male collection featured trousers, shirts, and T-shirts. The collection was a blockbuster, but with high sales, this collection also attracted criticisms from various parts of the country.

The main controversy was that the collection used the Sanganeri Handblock printing style, but this was created digitally and was used without the permission of the original community. This caused a lot of uproar about cultural misappropriation and the income and employment opportunity lost for the original craftsman community. In this lieu, a consortium of 15 Indian Artisan community associations and

collaboratives including Dastkaari Haat Samiti, an NGO of the craftsman community have addressed their concern in an “**Open letter**” raising various questions concerning his collection which is very identical to the Sangneri print which has been protected by way of GI certificate. The concerns raised by these organizations were:

1. Why were original artisan communities having proprietary rights over the designs used in the collection not involved in the entire “Wanderlust” project?
2. It was stated that the inspiration for this collection goes to the Indian crafts and designs, but there was no involvement of any Indian artisan community directly or indirectly. They were not even mentioned on the website. Thus, there was no visible benefit for such communities.
3. Although while marketing the whole collection it was stated that the whole collection was all about Indian traditions and cultures, but not a single piece was made by traditional methods, i.e., handmade. All the pieces were digitally printed.
4. Even if half of the craftspeople made the collection, then it would have provided them means to sustain their livelihood, especially during the period of the pandemic.

Sabyasachi appreciated the letter’s concern for artisan communities through a response to the open letter via his Instagram Stories. He stated that while the entire collection was just a “capsule collection,” it was certainly not a replacement for original crafts, cultures, and design. He also stated that he mentioned Indian Traditions and cultures as an inspiration for his collection a couple of times. Concerning copying the motifs, designs, and patterns, he did not copy, but it was an inspiration and motivation for his collection which was taken from Indian textiles, culture, heritage, etc. and was not labeled in connection to the Sangneri Handblock print. He asserted that his collaboration with a Swedish brand was to put Indian Traditions and culture on the World Map (Sheehan 2021).

17.3.3 Gucci’s Milan Fashion Week Runway Show

Gucci came under controversy when they sold Indy Turban for almost \$800. The Sikh community throughout the world was infuriated due to this Indy Turban runway introduction on white models for Gucci’s Fall Milan fashion week 2019 collection. Sikhs wear the turban, also known as the dastar, as a means of identifying themselves as adherents of their religion.

Gucci initially faced backlash from the general public when it used the turbans in a catwalk display at Milan Fashion Week in February 2018. Later, they clarified the fact that a Sikh turban is a religious object for Sikhism adherents rather than a trendy new adornment for sale, much to the item’s chagrin. Gucci’s decision to exhibit Indy Turbans on the runway and sell them as props were obviously straightforward. However, because of their dress, many Sikh men and women encounter abuse and

mistrust. Out of the more than 25 million Sikhs that live worldwide, the coalition estimated that 500,000 of them reside in the USA. The group tweeted, “The turban is not merely an accessory to commercialize” and said in another tweet that it had gotten in touch with Nordstrom and Gucci. Many believe that this cultural appropriation is improper, as those who wear turbans merely for fashion would not understand its profound religious importance. The racist issue surrounding Gucci’s adoption of the religious headdress is not its first. It stopped selling a wool sweater earlier this year after the company and clothing were mocked on social media for having a “blackface”-like aesthetic (Chiu 2019).

17.4 Discussion

Media and public outrage have forced these businesses to map out all the challenges they may face, carry out required due diligence, and mitigate the risks when they are designing some couture taking Indian culture and heritage as an inspiration and not replication. They should not just cut-copy-paste the elements of any culture. The main issue here is whether such misappropriation is being done deliberately or without any knowledge. Therefore, it is pertinent to note that such a gray area needs to be discussed.

17.4.1 Challenges and Risks

1. **Gray area between Inspiration and Cultural Misappropriation:** Recently, several businesses and brands have begun to develop cultural capsule collections honoring various cultures, artisan communities, and traditions. Even while it is amazing in so many ways, it makes one wonder where the line between inspiration and appropriation is. There is a comparable gray area between inspiration and misappropriation. For some people belonging to the same cultural community, a particular product will not be offensive, but for some, it might be just a copy. Several steps can be used to chalk out the line between inspiration and appropriation.

Susan Scaifidi, a lawyer by profession, has provided the 3S’s as a guide to differentiating between the two terms (Scaifidi 2005).

- (A) **Source:** The bigger contemporary cultural community aesthetics should serve as the source of inspiration. As a result, there is less risk of cultural misappropriation as it is not explicitly “calling out” a particular and niche community that has been appropriated and exploited in past. It is also pertinent to know who are the end consumers of the product. It is less likely that cultural appropriation would occur when the final consumer of the product belongs to the community from which the inspiration has been taken.

- (B) **Significance:** It means what is the significance of a particular element in someone's culture. One of the most important lines that should never be crossed is never to take inspiration or mix sacred elements of culture into one's product. Sacred elements are to be respected and cannot be taken as inspiration as they can often change the meaning of the element in its entirety. To avoid such situations, companies often check in with the members of that community to attain valuable feedback on the products and designs.
- (C) **Similarity:** When integrating another culture into a company's products and designs, it is crucial to ensure that the designs are inspired by the culture rather than being a literal replication of it. They should be an evolving form of art rather than a cut-copy-paste version (Scaifidi 2005).
2. **Brand reputation:** All the public and media outrages concerning cultural misappropriation and protecting indigenous artisan communities cause the dilution of the brand image and brand loyalty. It raises significant concerns over the business practices of a company. It also questions the loyalty of a company toward its country's culture and heritage.
 3. **No consolidated data forum:** There is no comprehensive framework to improve cultural knowledge and artwork and protect it against the practice of misappropriation. All the existing IP laws have different forums wherein one can find data concerning the cultural work which has been given protection, but we still lack a proper independent forum that can collate all the protected cultural elements, designs, and work under one roof. This is due to the presence of different IP laws for the protection of such work. It becomes difficult for the company to trace the actual origin of a particular artwork while incorporating them into its products. To keep a check on the activity of cultural misappropriation, we require a sui Generous system to protect such cultural artwork and protect the rights of the affected communities under one law. This can help to construct an independent forum wherein all the protected cultural artworks and designs can be listed under one government registry. It will be easier for businesses to do due diligence to avoid the problem of misappropriation.
 4. **Deficiencies in Existing IP laws like Geographical Indication:** GIs and brands have a lot in common even though their protection is provided under separate acts. The first trademarks in history were emblems that denoted the country of origin of products. By capitalizing on the local reputation, traders used these marks to distinguish products made in various areas or nations and to communicate a sense of quality. Geographical names, however, are not regarded as distinctive or competent to differentiate goods under the Trade Marks Act (The Trade Mark Act, NO. 47, Acts of Parliament 1999) and are therefore not registered as trademarks. Only geographical names that meet certain requirements can be registered under the GI Act 1999 [The Geographical Indication of Goods (Registration and Protection) Act, No. 48, Acts of Parliament 1999 (India)].

For a GI registration, a product should offer something that no other similar product does. Consequently, the fundamental purposes of identification and

differentiation apply to both GIs and brands protected under trademark. The reason behind this logic is that the legislation intended to avoid consumer confusion at the time of purchase or use of the goods. In the case of GI, the indication is a regional symbol used to identify items with different traits coming from a particular geographical region, and in the case of Trademark, the indication is to create brand recognition and not to give information about the origin of a particular geographical region.

GIs cannot be included in trademarks as trademarks only protect a single legal entity and not a community as a whole, whereas the GIs are given to the community. The GI act does not talk about ownership as such but talks about a right to claim whatever is yours. In contrast to brands, GIs lack a distinctive visual aspect that aids in simple recognition and is shared by all persons who claim it. Consequently, GIs are “half” or “pseudo” brands. For instance, there are various brands of Darjeeling tea available on the market, each referred to as a “Darjeeling tea” as well as a particular brand. Because brands are registered as trademarks, but GIs are not, brands are legally protected, but GIs are more vulnerable to abuse by dishonest actors because there is no strong element of identity (GI Tag Search, n.d.). Due to the lack of distinctive visual aspects in GIs, there is more possibility of infringement.

17.4.2 Proposed Solutions to Mutually Co-exist Within Current Legal System

The issue of reported GI violations due to cultural misappropriation presents an opportunity to address the burning question of how to co-exist in a way that is mutually beneficial within the confines of the current legal system, as well as steps that can be taken to ensure fair benefit-sharing mechanisms. An ecology must exist where both parties can profit from one another and prevent one-sided exploitation. Designers may urgently need to use Indian craftsmen’s creations for their ethnic wear collections, for instance. On the other side, these regional artisans and craftspeople could require the extensive exposure and recognition of well-known fashion houses and designers to boost their local economies.

1. **Sui Generis system:** In India, there are various IP protection laws to protect these cultural elements/designs which include the Copyright Act, Trademark Act Geographical Indication Act, and Designs Act. The artisan/indigenous communities have passed on the knowledge of their culture and traditions from generation to generation. What is important here to note is that even after the existing IP laws regime such traditional cultural artwork and knowledge are getting exploited and misused by the Companies in the name of the business. Therefore, there exists a need for some countries including India to develop their own Sui Generis system to protect such traditional cultural artwork and knowledge. Indigenous knowledge (TK) and traditional cultural expression (TCE) require a bigger collective

since they include communities, whereas conventional forms of I.P.R. are insufficient to safeguard them because they are based on the preservation of individual property rights.

2. **Traditional Knowledge Digital Library:** TDKL is an initiative taken by the Government of India in 2001 to protect the ancient and traditional knowledge of our country from biopiracy and exploited usage. It is a repository that contains documents concerning medicinal remedies, formulations, and knowledge (Traditional Knowledge digital library, n.d.). While the key goal of this resource is to protect and preserve valuable traditional knowledge, the TKDL can be made even more valuable by integrating a broader range of traditional and cultural elements and expressions, especially the ones that have been with us for centuries which may include various stitching, Handblock prints, handmade prints, etc., and making a public database forum for the general public, especially for the modern fashion designing companies. This will help these companies to start with the first step, i.e., identifying the source of origin.
3. **Use of logos for GIs:** Logos are the most visual element that can create an instant image in the mind of the consumer. Humans are visual creatures. We generally remember almost everything which we can visualize and logos are the perfect examples of this. A half-bitten apple instantly races our minds to the brand name called apple or the mermaid logo and takes us to Starbucks.

There are several instances throughout the world where the registered GI proprietor has developed an idiosyncratic identity that is symbolized by a logo that represents the GI. To create the Columbia Coffee Growers Federation, Colombian coffee farmers banded together in 1927. The federation made sure that Colombian coffee is cultivated sustainably and is recognized as the greatest coffee in the world. A fictional Colombian coffee producer named “Juan Valdez” appeared in the federation’s 1959 log. Unquestionably, the logo serves as the global symbol of Colombian coffee (Making the Origin Count: The Colombian Experience, n.d.).

4. **Access Benefit-Sharing systems:** The Biodiversity Act 2002 is effectuated from the convention on Biological Diversity which was adopted in 1992 (The Biological Diversity Act, ACT NO. 18 2002). “One of the most important principles of that convention was ensuring fair and equitable sharing of benefits of such use.” The principle established therein must be taken into account in its entirety to resolve the current dilemma, even though the objective of this bill is biological variety and supporting ABS from a biodiversity perspective (ABS MECHANISM GUIDANCE MANUAL, n.d.).

A basic framework can be presented using equitable benefit sharing and additional pertinent terms like:

1. Joint ownership or license of IP rights.
2. Technology transfer.
3. Just and fair compensation or royalties.
4. Procedures to acknowledge sources.

One of the most important arguments raised by various NGOs over Sabyasachi's collection was that the designer can popularize the artisan communities on an international level irrespective of the fact that whether they have any GI or not. Thus, the government can put in place legislation very similar to the biodiversity act along the lines of the equitable benefit-sharing rule.

17.5 Study Implication

17.5.1 Theoretical Implication

The companies/businesses using such cultural elements as inspiration shall make sure that such inspiration shall not become misappropriation, i.e., it should not be mere copy and paste. The companies must understand the source, significance, and similarity concerning the cultural elements they want to pick. With this study, it will be easier for future researchers and companies to understand where to draw the line, i.e., the difference between inspiration and misappropriation. They will be able to understand the need to give acknowledgment to these indigenous communities from whom they take cultural elements.

17.5.2 Practical Implication

The managers of these companies accused of cultural misappropriation must understand the importance of doing due diligence before taking the cultural elements without giving due acknowledgment. They shall be aware of the origins of the culture and shall keep the elements intact to preserve its history, form, and meaning. Through this study, they shall be able to use the solution set to their benefit without causing irreparable harm to the other party.

17.5.3 Social Implications

It is important for society as a whole to understand the true meaning behind this culture and the importance to preserve them to safeguard its own history. Through this study, society as a whole shall be able to understand how wrong is cultural misappropriation. They shall make all the efforts in a collective manner to safeguard these cultures and make sure to protect them via IP laws which in turn will help in lowering the infringement issue.

17.5.4 Policy Implications

Due to the lack of a consolidated data forum and increasing cases of cultural misappropriation, it becomes very important for the government to understand that there is an urgent need to either modify the existing IP legislations with respect to cultural misappropriation or enact a *sui generis* system altogether to preserve these cultural elements and expressions.

17.6 Limitations

The key limitations of this research are as follows:

1. The research was limited by the methods used. Only case based research method could be adapted; thus, we must rely on existing research, which may lack diverse perspectives. We were unable to use quantitative research methods to authenticate our research.
2. There are no statistically significant points, which would support the hypothesis even more.
3. Lack of accessibility of real-time data due to COVID-19 pandemic situation.
4. The nature of legal and management information is complex, and certain aspects cannot be conveyed to people without technical knowledge, making it problematic to determine the range in which changes can be executed.

17.7 Conclusion

The prime objective of this paper is to address the risks and challenges that a company may face while taking cultural elements, to contrast the level of protection afforded to brands via the trademark path with that afforded to brands via geographical indications (GIs), with the hope of identifying any glaring flaws in the latter and how can both the affected communities and the businesses charged with cultural misappropriation mutually co-exist in the current legal system. The current situation serves as a reminder to numerous industry players that additional traditional and cultural expressions and expertise may need to be protected under a legal framework in addition to those covered by the Bio Diversity Act. To ensure 360-degree protection for such an Indian cultural legacy, there needs to be a thorough and integrated system addressing the subject, whether as a brand-new *sui generis* system or as an addition to an existing statute or system. The companies shall conduct thorough due diligence when they are taking pieces from the Indigenous communities as an inspiration. Brands must adopt a more cautious approach to culture in light of this new generation to avoid mistakes.

Additionally, they ought to be open to criticism posted on social media and move quickly to respond to these pertinent queries. There are sensible methods that may be

taken to minimize any potential repercussions if brands are interested in preserving particular cultures. When a corporation wants to embrace other cultures and traditions, the structure shown here could be used throughout the entire organization. They should understand the 3S Principle, i.e., source, significance, and similarity. There should be no clumsy shortcuts, however alluring when dealing with communities that have centuries-old creative traditions and practices. It is encouraging to see that more and more people are rejecting the whims of big businesses who want to make us all into exact replicas of one another season after season. Only the skilled hands of Indian artisans can create a unique and beautiful appearance for every one of us.

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Chapter 18

A Study of Learners' Effectiveness in Online Mode of Learning: Sustainable Engagement in VUCA Environment



Chandan Medatwal and Sangita Nandan

18.1 Introduction

Learner engagement has shown a visibly positive impact on the outcome of learning, be it academic performance, attendance, programme completion or graduation percentage. Audas and Willms have explained engagement as the magnitude of a student's participation and identification with the institutions.

A 2018 Gallup poll observed the results of 5 million surveys over 12 years. As per this study, engagement can be defined as a measurement of involvement and enthusiasm. This study mentioned that engaged students are 2.5 times more likely to be optimistic about excellent grades and they are 4.5 times more hopeful about the future than the other disengaged students.

With the workforce and education system both being prevalently inclined towards an immersive technology orientation, the adaptability to digital trends became an uncompromising forte of learners, trainers and providers. This extended an invaluable opportunity to enhance student engagement and facilitating academic success. Students can collaborate using the extensive technology of digital platforms, engage in higher-order thinking, synthesize information from various sources and establish the social presence. In an online programme, content is already embedded through videos and reading materials into web resources.

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However, learners studying online are more vulnerable to attrition, and online programmes have lower rates of completion as compared to traditional programmes. This may be due to time management, learner expectations, sense of isolation and other factors which encompass engagement and success. Hence, it is important that the engagement initiatives of online students are better understood to facilitate their success.

18.2 Literature Study

18.2.1 *Types of Learner Engagements*

In the famous research by Moore, three types of interaction in online courses were elaborated. These are learner–content interaction, learner–learner interaction and learner–instructor interaction.

The learner-to-content engagement is the method of interacting with the content intellectually, which can evolve the perspective and understanding of the learner. In case of online learning, learner-to-content interaction can occur in both synchronous and asynchronous mode, while watching instructional videos, interacting with multimedia and searching for information.

The technologies like chat, blog, discussion boards have been essential in promoting learner-to-learner interaction in online courses. Commendable level of engagement is found in web-based applications like Google applications, Twitter feeds, or audio/video technology.

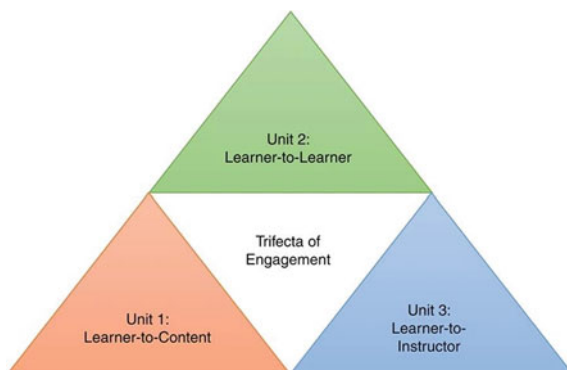
Learner-to-instructor interaction leads to higher student engagement in online programmes. However, unlike face to face, there are multiple student–instructor communication channels. Online instructors are required to pay special attention to student–instructor interactions which are liable to impact learning outcomes. The positive collaboration between students and instructors can be encouraged with an interactive and cohesive environment (Fig. 18.1).

18.2.2 *Engagement Dimensions*

Behavioural Engagement specifies behaviours that directly associate with the learning process. Examples of the same are attentiveness to the programme, completing assignments on time or augmenting learning through additional activities. For successful learning, it is expected that there must be a certain amount of academic behaviour as threshold.

Social engagement indicates the learner’s adherence to the classroom rules of behaviour. Instances are attending class on time, appropriate interaction with teachers and peers, or avoiding negative behaviours like withdrawing from participation in

Fig. 18.1 Trifecta of engagement (Cited from “A framework for an online teaching professional development course for faculty in higher education”, Heather J. Leslie) *Source* Moore



learning activities or unsettling the work of peers. A high degree of social engagement may facilitate greater learning and a low degree of social engagement may inhibit learning.

Affective engagement: Affective engagement is the emotional response of the learner. It provides the incentive for students to participate behaviourally and to persist in endeavours. Affectively engaged learners feel included and consider the feeling of belonging and valuing as important.

Cognitive engagement: We can identify cognitive engagement where the learner seeks clarification of concepts, reviews and revises learnt material, pursues a task which is difficult, extends the reading beyond the material assigned and explores sources of information. High levels of cognitive engagement along with self-regulation facilitate learning.

If the students are engaged and empowered in the learning community, they would channel the energy back into their learning, leading to short-term and long-term outcomes that can promote engagement (Bond et al. 2020a, b).

18.2.3 *Mediums of Engaging Learners Online*

We would explore the learner engagement in Online Environment with four reputed mediums, i.e. MOOC, virtual classrooms, LMS and social media (Fig. 18.2).

18.2.3.1 **Learners Engagement in MOOC**

MOOCs provide a sense of autonomy where, what to study and how to study can be decided by the learner himself. By measuring the engagement in MOOC, it is possible to identify learners with good progress and learners who are lagging and need support.



Fig. 18.2 Mediums of engaging learners online

Low completion rate of MOOCs continues to be a major concern. Research on learner engagement in MOOCs has an important perspective as higher MOOC completion rates and better academic achievements are correlated with engagement.

MOOC participants can explore a variety of technology tool categories like audio, video, blogs, collaborative spaces, gamification, mobile apps, ePortfolios, photos and images, presentations, resource libraries, simulations and social media. Participants of MOOC can independently explore resources and exchange thoughts with other participants. MOOC activities can be examined with click stream analysis of log data, which would involve students accessing videos, submitting assignments and commenting in forums.

18.2.3.2 Learners Engagement in Virtual Classroom

A virtual classroom creates an online space that encourages engagement and can emulate a traditional classroom, without the physical presence of students and teachers in the same location. However, such virtual classrooms would need a concrete strategy of learner's engagement to generate an equivalent level of interest, participation, and overall "buy-in".

18.2.3.3 Learners Engagement in LMS

Learning Management System (LMS) provides a medium where faculty and students can communicate efficiently. It integrates a wide range of pedagogical and course administration tools.

Most LMS' include tools for communication, course content, student assessment and a gradebook tool. The tools impart active learning through quizzes, collaboration through groups and discussion forums, and instructional supplements through availability of class materials, recorded lecture and access to faculty.

18.2.3.4 Learners Engagement in Social Media

While social media is assumed to be used for entertainment, it can be efficiently used for student engagement. Most of the students now use extensive social media communication through tools like Facebook and Twitter to interact with peers and faculty members. Students refer LinkedIn, Slide Share and YouTube frequently for learning contents.

18.3 Empirical Research: Engagement Across Learner Types

18.3.1 Context of the Research

Today, the learners are not limited within the boundaries of academia. Life-long learning has created learning needs across various phases of life, to stay updated and relevant and for the same it is not required to pick up the haversack and go back to the school. All that the learner would need is to identify his right requirements and access the right content through the right digital medium.

The different dimensions of engagement influence the learner's commitment to the programme which in turn would lead to the outcome of retention and completion. Behavioural engagement can be represented with attendance, activities and task orientation which explains the patterns of participation and progression. Social engagement can be identified by the learner-to-learner and learner-to-instructor collaborations and interactions. The emotional needs like enjoyment, motivation and pride of the learner determines the affective dimension. The cognitive skills like orientation towards critical thinking, capacity of relating the learning to real world problems and the additional efforts to go beyond the prescribed learning, indicates the cognitive dimension.

However, the intensity of influence of all these dimensions may not be the same for different categories of learners. A student might display more influence towards behavioural and affective engagement, while a working professional might be inclined towards cognitive engagement. Like the profile of the learners there can be diversities observed in the engagement tendencies of different age group. There is also a possibility that learners of different segments will be comfortable with different tools or mediums of online learning like MOOC, virtual classroom, LMS or social media, depending on the learning orientation, grasping power or convenience of lifestyle that is contributed by age or profile.

To probe and estimate the diversities of engagement dimensions among themselves and across some demographical factors of learners, a quantitative research was included in this study. The insights of this research would be beneficial from the business point of view in organizing a differentiated engagement plan for the varied learner segments.

18.3.2 Research Questions

1. Is there any correlation in the learner's approach to the four engagement dimensions?
2. Is there any change that can be observed in the learner's orientation across the four different types of engagement?
3. Will learners of different profile display different intensity towards the behavioural, social, affective and cognitive engagement?
4. Will learners of different Age group react differently in the behavioural, social, affective and cognitive engagement?
5. Is there any impact of the preferred learning medium (MOOC, LMS, social media, virtual classrooms) over the engagement dimensions?
6. A fair learning outcome of an online programme can be judged by cognitive engagement. Is it influenced by other dimensions of engagements?

18.3.3 Research Methodology

Primary data was accumulated with the help of questionnaires. Four questions of demographic profile and 12 questions on Likert scale were used to track the learner's engagement. The scale included four subscales representing the four engagement dimensions: behavioural, social, affective and cognitive. Each of these subscales included three relevant questions to trace the learner's orientation towards these dimensions. Only one open ended question which would have welcomed additional comments from the participants has been introduced.

Data was collected through a **Google Form** with random sampling through few assigned representatives who helped to circulate the form. It is assumed that the sample is socially homogeneous with no significant difference. **204** participants of different profile and age group who have experienced online learning participated in this survey.

18.3.4 Variables

Four variables were used for collecting the demographic information of the learner (Table 18.1).

12 variables on a Likert scale were used to check the engagement dimensions (Table 18.2).

Table 18.1 Details of demographic parameter captured

Demographic parameters	Question	Purpose to check	Variable name	Type
Profile of the learner	Your profile can be identified as	To understand the profile of the learner (student, job seeker, working professional)	Profile	Nominal
Age group of the learner	You belong to the age group	Check the appropriate age group range	Age	Ordinal
Medium of online learning	You have experienced the following medium of online learning as a learner	Medium/tool of online learning experienced which can be MOOC, virtual CR, LMS and social media	Medium	Nominal
Preferred medium of the learner	As per you, the most effective medium of online learning is	The medium in which the learner is most comfortable	Preferred_Medium	Nominal

18.3.5 Reliability Check

Reliability check was done on the data for the overall scale and for the four subscales, through SPSS. Cronbach's Alpha for overall scale was 0.927 which indicated that the data has successfully passed the test of reliability. For the dimension wise subscales also, Cronbach's Alpha was found to deliver reliable results.

18.3.6 Overview of the Data

The profile of the survey attendees was a mixed group of students (38%), job seeker (18%), and professional (44%) participants. The professionals who participated in this survey were working professionals in IT and non-IT, trainers, entrepreneurs and some miscellaneous variants like free-lancer, banker, hospitality consultants, etc., who were grouped into a broad category called others (Fig. 18.3).

About 49% of the survey contributors were from 18 to 25 years who are expected to be associated with academics as a student. 25% of them were from the range of 25 to 30 years, 16% from 30 to 40 years. About 8% of the crowd came from 40 to 50 years of age and 2% from even > 50 years. The survey was consciously kept gender neutral so a gender variable for male-female ratio and corresponding analysis was deliberately avoided.

Table 18.2 Details of variables for engagement dimensions

Engagement dimension	Question	Purpose to check	Variable name	Type
Behavioural	You are regular in attending the online programmes	Is the learner regular?	Attendance_Regularity	Ordinal
Behavioural	You make regular study notes during your sessions	Is the learner attentive?	Notes_Attentive	Ordinal
Behavioural	You focus on the scheduled completion of tasks	Does the learner focus on task completion?	Task_Completion_Focus	Ordinal
Social	You participate in the discussions/interactions held	Is the learner participative, interactive?	Participative_Interactive	Ordinal
Social	You collaborate with peers during group activity	Is the learner collaborative?	Collaborative	Ordinal
Social	You reach out to trainers clear your doubts	Is the learner open to ask questions?	Query_Responsive	Ordinal
Affective	You enjoy the sessions and look forward for the next one	Does the learner enjoy the session?	Enjoys_Session	Ordinal
Affective	You feel motivated and appreciated for your efforts	Does the learner feel motivated, appreciated?	Motivated_Appreciated	Ordinal
Affective	You feel proud on achieving a success milestone	Does the learner feel proud to achieve success?	Pride_on_Success	Ordinal
Cognitive	You apply your critical thinking skills to perform the course activities	Can the learner apply critical learning?	Critical_Thinking_Skills	Ordinal
Cognitive	You search for additional references beyond what is covered in the course	Can the learner put in additional effort beyond programme?	Additional_effort	Ordinal
Cognitive	You can relate your learning with real-life situations	Can the learner relate the learning with real world problems?	Relates_With_RealLife	Ordinal

Out of the four mediums of online learning, it is observed that maximum participants (148, 72%) are used to virtual classrooms. 32% (66) of the learners have experienced MOOC learning and 32% (66) have learnt from LMS. Even a fair amount of (64, 31%) of participants have experience of learning from social media 51% of the learners preferred virtual classrooms as their most preferred learning medium, followed by MOOC (22%). LMS is preferred by 16% and social media by 11% of the learners. It is evident that the interactive audio-visual influence of virtual classrooms wins the preference of majority (Table 18.3).

It is evident that virtual classrooms are most popular for younger generations (18–25), which can be Generation Z and Millennials (24–30, 30–40). Millennials

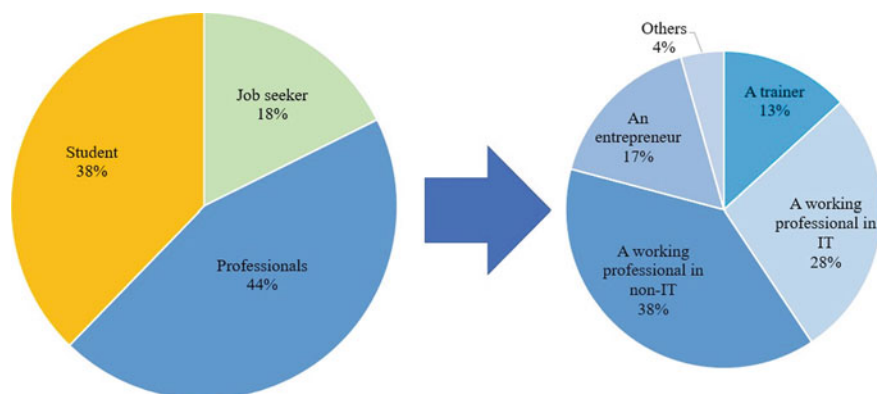


Fig. 18.3 Pie chart of participant profile

Table 18.3 Age group wise % of preferred learning medium

Age group	LMS	MOOC	Social media	Virtual classrooms	Grand total
18–25	12 (2%)	10 (10%)	16 (16%)	62 (62%)	100 (100%)
25–30	11 (22%)	10 (20%)	3 (6%)	26 (52%)	50 (100%)
30–40	7 (21%)	9 (27%)	4 (12%)	13 (39%)	33 (100%)
40–50	1 (6%)	14 (88%)	0 (0%)	1 (0%)	16 (100%)
> 50	2 (40%)	2 (40%)	0 (0%)	1 (20%)	5 (100%)
All	33 (16%)	45 (22%)	23 (11%)	103 (50%)	204 (100%)

are also comfortable with LMS. Gen X (40–50) mostly depends on MOOC. Since the participants of > 50 cohort is only 2% of the population, it indicates that there is a low orientation of online learning in this age bracket (Table 18.4).

It can be observed that for students and job seekers, virtual classroom has a very high preference. MOOC usage is not prevalent among students but is a popular medium for Professionals and job seekers. Job seekers and professionals have higher orientation towards LMS and social media (Table 18.5).

Table 18.4 Profile wise % of preferred learning medium

Types of learner	LMS	MOOC	Social media	Virtual classrooms	Grand total
Job seeker	6 (17%)	8 (22%)	4 (11%)	18 (50%)	36 (100%)
Professionals	17 (19%)	30 (33%)	12 (13%)	32 (35%)	91 (100%)
Student	10 (13%)	7 (9%)	7 (9%)	53 (69%)	77 (100%)
All	33 (16%)	45 (22%)	23 (11%)	103 (50%)	204 (100%)

Table 18.5 Segment wise satisfaction % (Agree + strongly agree)

Category	Segment	Behavioral			Social			Affective			Cognitive		
		Attendance regularity (%)	Attentiveness through study notes (%)	Scheduled completion of tasks (%)	Participativeness and interaction (%)	Collaboration (%)	Reaching out to trainers (%)	Enjoy sessions (%)	Motivation and appreciation (%)	Pride (%)	Critical thinking (%)	Additional reference (%)	Relate to real life (%)
Profile	Job seeker	97	94	97	89	83	86	94	86	92	89	86	86
	Professionals	95	89	93	87	90	95	88	86	91	97	82	92
	Student	100	94	99	95	96	99	94	94	96	97	96	94
Age	18-25	99	94	98	95	95	95	94	90	95	97	96	93
	25-30	94	90	96	88	88	98	92	94	96	90	80	88
	30-40	94	91	94	91	91	94	94	91	94	97	85	88
	40-50	100	88	88	63	81	81	69	56	69	100	69	100
	> 50	100	80	100	100	80	100	80	100	100	100	100	100
Preferred medium	LMS	100	80	100	91	94	97	88	88	94	100	100	100
	MOOC	99	94	98	80	84	91	89	80	84	97	96	93
	Social media	94	90	96	96	87	91	91	87	96	90	80	88
	Virtual classrooms	94	91	94	93	94	96	93	93	96	97	85	88
	Grand total	97	92	96	90	91	95	91	89	93	96	88	92

Table 18.6 Segment wise satisfaction % (Agree + strongly agree)

Dimension	Parameters	Mean	Std. deviation	N
Behaviour	You are regular in attending the online programmes	4.5	0.616	204
Behaviour	You make regular study notes during your sessions	4.4	0.719	204
Behaviour	You focus on the scheduled completion of tasks	4.46	0.573	204
Social	You participate in the discussions/interactions held	4.32	0.738	204
Social	You collaborate with peers during group activity	4.32	0.696	204
Social	You reach out to trainers clear your doubts	4.44	0.666	204
Affective	You enjoy the sessions and look forward for the next one	4.32	0.718	204
Affective	You feel motivated and appreciated for your efforts	4.37	0.708	204
Affective	You feel proud on achieving a success milestone	4.47	0.623	204
Cognitive	You apply your critical thinking skills to perform the course activities	4.43	0.596	204
Cognitive	You search for additional references beyond what is covered in the course	4.29	0.757	204
Cognitive	You can relate your learning with real-life situations	4.32	0.744	204

18.3.7 Statistical Observations

18.3.7.1 Item Statistics

The highest mean is for the **Attendance_regularity** parameter, and the lowest mean is observed to be for the **Additional_effort** parameter, which indicates that while most of the learners attend sessions regularly, they are not so confident of the additional efforts beyond the course (Table 18.6).

18.3.7.2 Correlations

It is also observed that the parameters are positively and moderately correlated across the scale and between the subscales.

The top two correlation is observed between the following parameters:

- Pride_on_success and Motivated_appreciated (0.80)
- Collaborative and Participative_Interactive (0.72).

This indicates that learners who feel motivated and appreciated also feels pride on their accomplishments and vice versa, thereby displaying a strong inclination towards affective engagement.

Also, the learners who interacts and participates in the sessions are those extroverts who tends to be more collaborative, thereby accentuating the social dimension.

The bottom two correlation is observed between the following parameters:

- Critical_Thinking_Skills and Notes_Attentive (0.27)
- Relates_With_RealLife and Task_Completion_Focus (0.29).

18.3.7.3 Correlation Table

This provides an interesting outlook towards the fact that a learner who holds the skills of critical thinking need not necessarily be a learner who diligently documents every session with notes. Similarly, a hard-working learner who expresses behavioural engagement with a high focus towards task completion may not be able to display cognitive engagement by relating the learnt concepts to real life (Table 18.7).

18.3.7.4 Dimension Mean

The average of all questions of each dimension was taken up as the Dimension Mean. Accordingly, the following mean and standard deviation were obtained for each dimension, which were used subsequently to establish the hypotheses (Table 18.8).

18.3.8 Analysis of Survey Data

The overall analysis of data was done with correlation, ANOVA and regression. This helped to test some significant hypotheses that answered the research questions.

- A correlation between the different engagement means indicated that all the engagement dimensions (Behavioural, Social, Affective and Cognitive) are positively correlated.
- One way ANOVA (Analysis of Variance) over different engagement dimensions indicated that there is no significant difference in the learner's orientation across the different engagement dimensions.
- While testing the data with ANOVA across several profiles of learners in the study (Student, Job seekers, working professionals), it was observed that there are significant difference in all types of engagement across different profiles of learners. Which would mean that different profiles would react differently to the engagement initiatives.
- It was also tested with ANOVA that there is significant difference in various types of engagements between different age group of learners.
- There is no significant difference in the Behavioural, Social and Cognitive engagement across different learning mediums. However, there is a significant difference in the Affective engagement between users of different learning mediums.
- A Regression Analysis was done through SPSS with Cognitive engagement as Dependent variable and Behavioural, Social and Affective Engagement as

Table 18.7 Correlations between variables of the engagement dimensions

	Attendance_ Regularity	Notes_ Attentive	Task_ Completion_ Focus	Partici_ ative_ Interactive	Collaborative	Query_ Responsive	Enjoys_ Session	Motivated_ Appreciated	Pride_ on_ Success	Critical_ Thinking_ Skills	Additional_ Effort	Relates_ with_ RealLife
Attendance Regularity	1.00											
Notes_ Attentive	0.68	1.00										
Task_ Comp leton_ Focus	0.52	0.53	1.00									
Participative_ Interactive	0.52	0.53	0.59	1.00								
Collaborative	0.51	0.54	0.51	0.72	1.00							
Query_ Responsive	0.58	0.49	0.44	0.60	0.65	1.00						
Enjoys_ Session	0.60	0.59	0.51	0.55	0.61	0.64	1.00					
Motivated_ Appreciated	0.40	0.42	0.53	0.54	0.55	0.54	0.56	1.00				
Pride_ on_ Success	0.39	0.39	0.56	0.50	0.55	0.53	0.59	0.80	1.00			
Critical_ Thinking_ Skills	0.32	0.27	0.43	0.44	0.42	0.39	0.43	0.59	0.52	1.00		
Additional_ Effort	0.44	0.58	0.42	0.52	0.57	0.51	0.62	0.58	0.58	0.54	1.00	
Relates_ Wit h_ RealLife	0.40	0.39	0.28	0.44	0.48	0.47	0.52	0.48	0.42	0.57	0.62	1.00

Table 18.8 Statistics of dimension mean

Behavioural		Social		Affective		Cognitive	
Mean	4.45	Mean	4.36	Mean	4.39	Mean	4.35
Standard error	0.04	Standard error	0.04	Standard error	0.04	Standard error	0.04
Median	4.67	Median	4.33	Median	4.33	Median	4.33
Mode	5	Mode	5	Mode	5	Mode	4
Standard deviation	0.54	Standard deviation	0.62	Standard deviation	0.6	Standard deviation	0.59
Sample variance	0.29	Sample variance	0.38	Sample variance	0.36	Sample variance	0.35
Range	2.67	Range	4	Range	2.33	Range	2.67

Independent variables (predictors). The analysis successfully observed that the Cognitive engagement of the learner is influenced significantly by Affective and Social engagement. However, the individual and routine adherence to Behavioural engagement does not influence the Cognitive engagement. This was also observed in the low correlations between the outcome of Behavioural and cognitive questions.

18.3.9 Observations from the Descriptive Question of the Survey

From the learner comments it is evident that a weak infrastructure and network connectivity concerns are still a showstopper to engage the learners positively in the programme. Due to pandemic, this was a situational transition from physical classroom mode education for many learners. Hence, there persists a dependency on the traditional model which would have provided the comfort of face-to-face interactions and over the table doubt clearance (Table 18.9).

18.4 Inferences from the Research

It is evident that all four dimensions of learner's engagement are closely and positively interrelated. If one of these dimensions improve for the learner, then the other dimensions would also improve. We can relate this with the real-life scenario of a student whose first baby step towards the online learning is a diligent focus on individual behavioural engagement, which would mean that the student would display academic orientation like attending the session, absorb and assimilate the learnt knowledge with notes, and focus on task or assignment completion. It is expected

Table 18.9 Appreciations and concerns about online learning

Appreciations	Concerns
I found virtual classes interesting as well as engaging, just like the physically attended classes. So, I would say it has been great experience as an online learner till now	There is lot of distraction and lack of concentration because of proper infrastructural set-up such as those in classrooms
We can learn anywhere anytime, that's an advantage I feel being an online learner. As MBA student, when the full day is packed with classes, at night we can learn anything we want which in traditional way we can't do	It may be termed as the future of learning, but the learning you can get in physical classrooms cannot be compared with online
Great experience and online classes are better than offline class because it saves time...	It's good overall, but problem happens due to net consumption or internet bandwidth issue
It was a nice experience. The class was very detailed and organized	Sometimes it's good but when it comes to do coding it sometimes get very difficult to deal with ...
As a working pro, the only way to upskill myself is through MOOC studies. I would not be able to go back to a classroom model of interactive learning	I prefer the traditional way of learning and it has been difficult for me to make-shift into the virtual learning system

that his social engagement would also improve as he would closely interact with other learners and his trainers. Like any interested learner he would highly or moderately be emotionally engaged with the programme, seek appreciation and feel proud of his achievement. The actual outcome of his learning will be when he can apply this knowledge in real life and use the concepts in critical thinking and goes beyond the prescribed learning for additional references.

It is also evident that the profile of the learner has an impact on the learning medium that the learner will chose to learn with. Virtual classroom continues to be the preferred choice for almost all profiles. However, for working professionals and job seekers, MOOC is also a comfortable medium. A student or a jobseeker would still be inclined to a virtual classroom environment, considering that it emulates the traditional learning and is centred around the trainer. MOOC as a medium is still not prevalent amongst students as their engagement is primarily oriented to the classroom model. LMS as a medium has a limited preference across profiles which indicates that the power of a learning management system is still not greatly leveraged by majority of the learners. Learning through social media is not very popular for traditional students, while the professionals are more inclined to learn in this mode. There is a big opportunity to increase the popularity of social media for learning rather than only use it for entertainment in the student and job seeker community.

The age difference also influences the choice of learning medium. The younger generation Z (18–25) and the Millennials (24–30, 30–40) are more comfortable with virtual classrooms. Millennials are also found to be at ease with LMS. However, Gen X (40–50) are mostly interested in MOOC as they have little opportunity and time for a structured time bound online classroom. The upper age bracket of Gen X and

Baby Boomers (> 50) are the senior cohort with a low orientation towards online learning.

It was also observed that the choice of medium did not have any significant influence on the behavioural, social and cognitive engagement. However, there is a difference in affective engagement for learners with different medium preference. There can be further empirical research to test that learners with a choice of virtual CR or social media may be having a higher affective engagement as compared to learners choosing MOOC or LMS.

Psychological orientation changes across life stage and age. Hence, learners of different profile (student, job seeker and working professional) and different age range show significant difference in the engagement patterns of behavioural, social, affective and cognitive engagement.

The most significant engagement is the cognitive dimension which indicates the assimilation and the implementation of learning. The true outcome of learning is visible in this dimension. It is important to note that the social and affective engagement which involve interaction, collaboration and positive enthusiasm significantly influences the cognitive engagement of learners, whereas behavioural engagement which indicates the learner's diligence and discipline does not influence the cognitive engagement.

The qualitative comments have also signified the alert that while the migratory shift towards online learning is inevitable, the infrastructural readiness of learning environment is still a concern to many. The overall class experience gets greatly damaged due to low network connectivity. Also, many learners are still loyal to the traditional mode of learning, and this orientation will not change if there is no significant effort from the provider to create customized engagement plan for different learner segment depending on the demographical need. Due to the lack of a focussed approach, the tools like MOOC, LMS and social media may remain unleveraged and virtual classroom despite the technical brilliance of the methodology will remain as a challenger to traditional classroom.

Hence, we can derive an “**Association Model of Engagement Dimensions**” (Fig. 18.4), where the associations between behavioural, social, affective and cognitive engagement can be emphasized. While behavioural and social engagements can be observed as learner conduct during the learning, the affective and cognitive engagements are more internal with subtle manifestation. The demographic factors of learners like profile, age, learning medium and environment have an overall influence over the engagement dimensions.

18.5 Further Scope of Research

While the diversity of the engagement dimensions across different segments has been successfully emphasized in this research, it can be further extended to find out the exact reasons of these differences and what are the segment specific measures that can be taken to neutralize and enhance the engagements across all segments. The

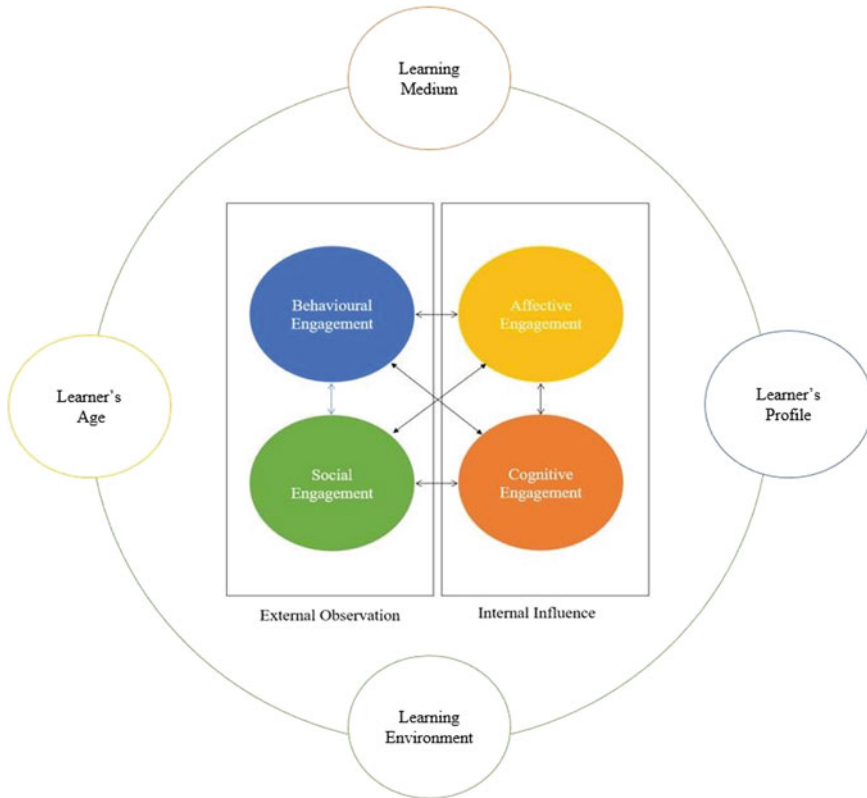


Fig. 18.4 Association model of engagement dimensions (By Author)

research can also extend to augment the interest and adaptability of the mediums that are not leveraged to their full potential.

18.6 Conclusion

Learning is a life skill now and not an academic activity of early years. The online pedagogy is here to stay with its pervasive and disruptive presence, and it is not a replacement measure of traditional learning in the interim period of pandemic crisis. The digital media, the connectivity and flexibility of learning anytime anywhere by anyone, has changed the world of learning forever; be it school based, or skill based. What will fall short, despite the technological competency and investments at all level, is the capability to address learner's psychology and engage the learners appropriately to cater their needs.

However, engagement, like any other emotion, is not a permanent state. Sustainance of engagement is susceptible to changes in several contextual variables. It would be important for any player of the education business to review these variables periodically, and provide the right frequency and measures of engagement, to keep the learners involved.

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Chapter 19

Relationship Between Inflation and Macroeconomic Variables During Pre- and Post-reform Period



Indu Grewal

19.1 Introduction

Inflation happens to be the most crucial macroeconomic variable in an economy. Inflation being critically connected with other variables deeply impacts the functioning and behaviour of other macroeconomic variables. It further being a very complex phenomenon has been determined by multiplicity of factors. The control and management of inflation demands the deeper understanding of the nuances of its relationship with other macroeconomic variables more particularly over the specific time periods. The pace and direction of inflation remains different during different phase of economic growth. The decision to invest and consume is typically distorted by high inflation rates, which may derail the entire economic set up of the economy. That is why inflation has always remained the daunting task for the policymakers to deal with the inflationary pressure in an economy. In the normal course of economic development, the money supply generates different sort of economic disequilibria with other macroeconomic variables. Therefore, the measurement of over period inflationary movements acquires added importance for maintaining the much needed balance between real and monetary sector for attaining steady state growth.

During the last about two decades, the Indian economy has followed a high growth trajectory along with enhanced circulation of money supply with consequential impact on inflation. India has experienced relatively high growth in national income during the recent decades. The benefits of high growth have not been evenly distributed which resulted in higher level of inequalities. Consequently, the purchasing power of some sections of the society increased tremendously with significant implications for the process of income generation mediated by inflationary mechanism. The resultant structural disequilibria makes the task of inflation management extremely difficult when inflation is impacted by both cost-push and

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demand-pull forces in a way that is connected. The strengthening of supply side matrix through increasing the output of products and services eases the inflationary pressure when it happens under well calibrated situation of money supply. In open economy situations, the movement of prices in the international market, directly or indirectly, along with internal factors impacts the domestic inflation. Therefore, it becomes important to study the relationship of inflation with different macroeconomic variables for an economy which realized higher growth under open economy framework.

19.2 Empirical Underpinning of Inflation

Empirical literature holds that inflation maintains extremely complicated relationship with other macroeconomic variables as its pattern and behaviour were found to be sensitive to time, context and growth trajectory of the country. In an open economy set-up, in addition to the mutual interplay of domestic factors the inflation as a monetary phenomenon embraces the influence of external forces in the form of current and capital account transactions. The study by Saritha et al. (2015), over the period 2006–2015, by using Granger causality and Johansen co-integration tests showed that the inflation has made strong impact on the Industrial Production Index, the interest rate and national income in India. However, in the instance of India, the effect of the exchange rate regime on inflation was not apparent. Similarly, Salian and Kumar (2011) said that inflation was harmful to the expansion of the economy and the long-term association between inflation and economic growth was unfavourable.

In their research of inflation in the Gulf Cooperation Council (GCC), Kandil and Morsy (2009) argued that the most significant foreign element in the inflation in the GCC after 2003 was inflationary pressures in the trading partners. Based on monthly data for the years 1953 to 2005, Bhalchandra and Rami conducted another research of the relationship between India's money supply and price level demonstrated that the discussion of the function of the money supply in the history of economic theory, determining nominal income and pricing has remained one of the key challenges.

Ratnasiril (2007) uses the Vector Autoregressive method to draw a conclusion in the case of Sri Lanka for the years 1980 to 2005, that the main cause of inflation was a rise in the amount of money in circulation. In his analysis of Kuwait from 1972 to 2004, Al Omar (2007) found no indication of a long-term correlation between internal inflation and its overseas counterpart. It also demonstrates how the growth of domestic liquidity has an impact on domestic inflation.

Jaumotte and Morsy (2012) investigated how the labour and product markets contributed to inflation in the Euro zone region between 1983 and 2007. By making use of backward looking Phillips curve, the study concluded that inflation in this region has increased due to policies like high employment protection and collective bargaining. Thus, empirically establishing casual relationships of inflation with other variables remains a daunting task as inflation absorbs the impact of monetary

factors, product and factor markets, inflationary situation in trading partners, growth trajectory of the economy and money supply.

19.3 Materials and Methods

The study's foundation is secondary data covering the 37-year period from 1980 to 2016. The pre-reform period (1980–1990), post-reform period (1991–2000) and subsequent period are the three sub-periods that have been purposefully divided into this period (2001–16). The study is based on secondary sources of data that have been publicly released. The information on pertinent macroeconomic variables was primarily taken from the Ministry of Statistics and Policy Implementation and the Reserve Bank of India's official website. All the variables' monthly data have been created. Data for some variables were available on a daily basis; monthly average figures were used for the variables for which data were available on a daily basis. To process the data, E-Views software has been used. The various methods and techniques used in the analysis briefly are as follows:

Inflation Measurement: Utilizing the Cost of living Index, the inflation rate in the economy has been calculated (CPI).

Normality Test: The Jarque–Bera test is used to assess the variability of a variable, whether it is regularly distributed or not.

Causality Test: To clearly understand the movement of variables, the direction of causality of the variables under investigation has been analysed. The Granger causality test is used to determine whether there is a unidirectional or bidirectional relationship between the variables.

For the joint significance of the coefficients, the F test is performed according to the null hypothesis, Y_t is not bringing any change in X_t and the opposite of this is also true. If we deny the acceptance of the null hypothesis, it confirms that Granger in causality is present.

Stationarity Tests: The Augmented Dickey–Fuller test has been used to ensure that our data are stationary, with crucial values supplied by MacKinnon.

Co-integration: All variables' ADF values have already been determined.

Though Engle and Granger developed a test for single cointegrating relationship, but Johansson had developed technique accommodates more than one cointegrating relationships. This test is, generally, carried out with two forms—trace and Eigen value. The number of cointegrating equations in the model is tested through maximum Eigen values in this study.

Impulse Response Function (IRF) The impulse response functions reveal how the variables interact. We can calculate the effects of a change of one standard deviation in the exogenous variable on the endogenous variable in the system using IRF.

19.4 Analysis and Discussion

Descriptive Statistics Results of Table 19.1 show that the CPI variable has witnessed an increasing trend over time with large instability. It is observed that the average value of CPI was 27.94 (SD = 7.15) for (1980–1990), has increased to 70.08 (SD = 16.83) during (1991–2000) and dramatically increased to 167.46 (SD = 59.33) during (2001–2016). Besides, the distribution of CPI was not normal, as the ‘Jarque–Bera Test Statistic’ turned out to be significant for all sub-periods and consequently the null hypotheses were rejected.

Causation between Variables (Pair-wise Causality) Table 19.2 data based on Granger causality established that CPI and IIP variables have two-way causation. IIP is crucial from a supply-side perspective since it will increase along with a decrease in inflation. Results of the table show that IIP crucially affects the CPI and the opposite of this is also true. The import variable does not cause CPI variable (insignificant F-statistic); however, CPI has a considerable impact on imports. If the relation between MS and CPI is considered, then the literature shows a very strong connection between the two. And, the same is being depicted in the table as well wherein the F-statistic value is significant, thereby rejecting the null hypothesis that MS does effects CPI, however, the opposite of this is not true due to the insignificant value of F-statistic. The MS and CPI do not hold two-way causation, as MS is a significant contributor to CPI (significant F-statistic value). But MS does not get

Table 19.1 Descriptive statistics of the model: 1980–2016

Measures	Period	Mean	S.D	Skewness	Kurtosis	Jarque–Bera	Test probability	N
CPI	1980–2016	99.66	73.28	0.92	2.83	63.18	0.00	444
	1980–1990	27.94	7.15	0.23	1.96	7.10	0.03	132
	1991–2000	70.08	16.83	0.12	1.68	8.97	0.01	120
	2001–2016	167.46	59.33	0.50	1.80	19.54	0.00	192
IIP	1980–2016	85.18	54.14	0.60	1.93	482.28	0.00	444
	1980–1990	30.86	7.56	0.56	2.45	8.50	0.01	132
	1991–2000	59.86	11.09	−0.09	1.78	7.65	0.02	120
	2001–2016	138.35	37.42	−0.34	1.66	17.99	0.00	192
IMP	1980–2016	556.27	771.83	1.34	3.28	134.68	0.00	444
	1980–1990	17.66	7.77	1.24	4.02	39.69	0.00	132
	1991–2000	105.81	51.31	0.36	1.99	7.70	0.02	120
	2001–2016	1208.12	790.52	0.20	1.51	18.88	0.00	192
MS	1980–2016	25,262.70	33,582.40	1.48	4.01	182.52	0.00	444
	1980–1990	1217.35	607.88	0.63	2.22	11.99	0.00	132
	1991–2000	6346.06	2864.49	0.55	2.10	10.05	0.01	120
	2001–2016	53,616.88	34,319.04	0.53	1.96	17.88	0.00	192

Source Computed by the Researcher

affected by levels of CPI (insignificant F-statistic value). It has also been established that MS and IIP, MS and imports, bear two-way causation (all significant F-statistic values). Importantly, the value is significant for both the cases it can be figured out that both the variables MS and IIP cause each other. The same conclusion is true for MS and IMP as well due to significant F-statistic value as they both cause each other.

The prior to (1980–1990) era the study was a period of relatively slow growth in the economy as compared to the subsequent sub-periods. The null hypothesis that imports do not cause the CPI has been disproved during this sub-period, but CPI has a considerable effect on imports. Since, during this period, Indian exposure to the outer world was very less; hence, imports did not have an effect on Indian inflation. Besides, high rates of inflation during this sub-period of the study had considerable influence on the imports. During this time period, import and CPI did not display two-way causation. Imports were affected by CPI, but CPI was indifferent towards imports. So far two causations between money supply and CPI are concerned we got results which were contrary to the established theory. During this sub-period, the null hypothesis of MS does not cause CPI has been accepted. There had been two-way causation between money supply and import variables. This was evident from the significant value of F-statistic, that is, hypotheses of no causation had been rejected.

During (1991–2000), some variables have witnessed the change from the first sub-period. This period is loaded with new economic reforms, and some results in terms of different causation were expected. During this period, the results for the first two variables, i.e. IIP and CPI are the same as in the pre-reform period, whereas IIP is not causing CPI, but CPI definitely causes IIP. However, the same is not applicable for IMP and CPI as the result shows that both IMP and CPI do not cause each other due to the insignificant F-statistic value, which means that during this time period import and CPI did not have causality relation. Considering the relationship between MS and CPI there is one-way causation, MS does not cause CPI due to insignificant value, whereas CPI does cause MS (due to significant F-statistic value). IMP and IIP show two-way causation, but MS and IIP again confirm one-way causation. Lastly, MS and IMP had bidirectional relation which is in line with the pre-reform period.

However, during subsequent period, as they are depicting two-way causation which means both are causing each other which is in line with the overall study period, therefore, it will be wise to conclude that both the variables affect each other in a significant way. For, IMP & CPI it is one-way causation in the Prior to the Reform and Final period whereas the table depicts no relation at all in the After—reform period, overall period, although, shows one-way causation wherein the value shows CPI causing IIP which goes against the result of the pre-reform period. Surprisingly, MS and CPI had displayed one-way causation during previous sub-periods and have recorded two-way causation during (2001–2016). There is strong evidence of the cause and effect relationship between MS and CPI, which is depicted in the overall study period as well. However, the pre- and post-reform periods show only one-way causation, but two-way causation stands to exist in the subsequent period, and eventually MS comes out to be more significant in determining CPI. MS and IIP show a strong causal relation in overall study period wherein they both affect each

Table 19.2 Pair-wise Granger causality tests (1980–2016)

Null hypothesis	1980–2016			1980–90			1991–2000			2001–2016		
	F-statistic	Probability	F-statistic	Probability	F-statistic	Probability	F-statistic	Probability	F-statistic	Probability	F-statistic	Probability
IIP does not lead to CPI	7.261*	0	1.1477	0.3206	1.1004	0.3362	4.488*	0.0093				
CPI does not lead to IIP	14.325*	0.0001	9.0196*	0.0001	12.7232*	0	9.085*	0				
IMP does not lead to CPI	0.6929	0.5006	5.1861*	0.0068	0.5943	0.5536	4.837*	0.008				
CPI does not lead to IMP	6.936*	0.001	0.6721	0.5124	1.0988	0.3367	1.176	0.31				
MS does not lead to CPI	6.049*	0.0025	1.979	0.1425	0.7592	0.4703	3.052*	0.049				
CPI does not lead to MS	2.889	0.0567	8.1601*	0.0004	5.3554*	0.006	5.702*	0.003				
MS does not lead to IIP	7.5017*	0.0006	5.475*	0.0052	7.3794*	0.0009	7.276*	0				
IIP does not lead to MS	21.29*	0	0.1693	0.8443	0.5707	0.5667	24.39*	0				
MS does not lead to IMP	4.364*	0.0133	4.3812*	0.0144	4.1584*	0.018	3.307*	0.038				
IMP does not lead to MS	8.410*	0.0002	7.4462*	0.0008	7.3451*	0.001	1.582	0.208				

Source Computed by the Researcher
* F-statistic

other; but in pre- and post-reform period, there is one-way causation in which IIP stands out to be more important in determining MS. Results in all the time periods under consideration show a very strong relation between MS and IMP except for the subsequent period which shows one-way causation. Two-way causation has been shown in all the periods.

Stationary Tests As per usual procedure, the stationarity has been tested using the Augmented Dickey–Fuller (ADF) test (Table 19.3). Each variable was separately integrated at the order one level. After stationarity for the data was established in the first difference.

Co-integration (Johansen) The co-integration test cannot be performed without first recognizing the non-stationarity of the data. It has been established that the

Table 19.3 (ADF) unit root test (Stationarity test)

Variable	ADF test statistic	In level form		ADF test statistic	In first difference form	
		MacKinnon critical value			MacKinnon critical value	
		1%	5%		1%	5%
<i>1980–2016</i>						
CPI	0.73	–3.98	–3.42	–10.67	–3.98	–3.42
IIP	–2.65	–3.98	–3.42	–12.64	–3.98	–3.42
IMP	5.15	–3.98	–3.42	–6.51	–3.98	–3.42
MS	–1.35	–3.98	–3.42	–9.97	–3.98	–3.42
<i>1980–1990</i>						
CPI	–0.99	–4.03	–3.45	–6.49	–4.03	–4.03
IIP	–1.58	–4.03	–3.45	–7.11	–4.03	–4.03
IMP	2.16	–4.03	–3.45	–6.08	–4.03	–4.03
MS	–2.32	–4.03	–3.45	–7.36	–4.03	–4.03
<i>1991–2000</i>						
CPI	–2.57	–4.04	–3.45	–5.28	–4.04	–3.45
IIP	–0.96	–4.04	–3.45	–6.86	–4.04	–3.45
IMP	1.08	–4.04	–3.45	–7.55	–4.04	–3.45
MS	–3.08	–4.04	–3.45	–6.03	–4.04	–3.45
<i>2001–2016</i>						
CPI	–2.05	–4.01	–3.43	–7.63	–4.01	–3.43
IIP	–2.82	–4.01	3.43	–8.52	–4.01	–3.43
IMP	–2.49	–4.01	3.43	–6.68	–4.01	–3.43
MS	–2.48	–4.01	3.43	–6.22	–4.01	–3.43

Source Computed by the Researcher

hypothesis of one cointegrating equation has also been rejected except for (2001–2016) era. Therefore, it can be concluded that there were two cointegrating equations for the entire study period, first and second sub-period, but for the third sub-period there was one cointegrating equation (Table 19.4).

The results further proved that MS was positively related to CPI. Though, the empirical evidence shows that increased supply might result in a decrease in inflation which has been confirmed by our results. The normalized co-integration equation reflects a very prominent feature of inflation of our country that constant term is negative and significant which means that inflation can also be lowered by adopting the moral suasion method (Table 19.5).

The normalized long period relationship during the (1980–90) shows that MS was positively related to CPI. As far as IMP was concerned it shows mixed results. India imports such goods which have a significant impact on inflation. Our results show that IMP variable has a positive but insignificant coefficient. Similar relation has been

Table 19.4 Johansen co-integration tests based on monthly data

Eigen value	Likelihood ratio	5% Critical value	1%-Critical value	Hypothesized no. of CE(s)
<i>(1 January 1980 to 31 December 2016)</i>				
0.20	128.05	47.21	54.46	None ^a
0.06	37.58	29.68	35.65	At most 1 ^a
0.03	13.78	15.41	20.04	At most 2
0.01	2.92	3.76	6.65	AT most 3
<i>(January 1980 to Dec 1990)</i>				
0.44	131.39	47.21	54.46	None ^a
0.29	57.31	29.68	35.65	At most 1 ^a
0.10	14.69	15.41	20.04	At most 2
0.01	1.06	3.76	6.65	At most 3
<i>(January 1991 to December 2000)</i>				
0.40	104.86	47.21	54.46	None ^a
0.23	45.40	29.68	35.65	At most 1 ^a
0.12	14.61	15.41	20.04	At most 2
0.00	0.14	3.76	6.65	At most 3
<i>(1 January 2001 to 31 December 2016)</i>				
0.2347	75.8706	47.2100	54.5600	None ^a
0.0822	25.8377	29.6800	35.6500	At most 1 ^a
0.0447	9.7894	15.4100	20.0400	At most 2
0.0065	1.2204	3.7600	6.6500	At most 3

^a Rejection of the Hypothesis at 5% (1%) significance level LR test indicates two cointegrating equations at a 5% significance level

Source Computed by the Researcher

Table 19.5 Normalized co-integration relation of variables based on monthly data

Variable	Cointegrating coefficient	T statistic
<i>(January 1980 to Dec 2016)</i>		
CPI	1.00	–
IIP	2.08	4.88
IMP	0.00	2.61
MS	–0.04	1.98
C	135.62	3.12
<i>(January 1980 to December 1990)</i>		
CPI	1.00	–
IIP	–2.29	2.37
IMP	0.08	0.99
MS	–2.98	3.42
C	44.52	2.70
<i>(January 1991 to December 2000)</i>		
CPI	1.00	–
IIP	0.62	1.98
IMP	0.00	0.14
MS	–0.05	2.43
C	36.34	2.40
<i>(1 January 2001 to 31 December 2016)</i>		
CPI	1.00	–
IIP	–0.47	4.75
IMP	0.01	4.54
MS	0.00	4.15
C	128.81	3.76

Source Computed by the Researcher

obtained for (1991–2000). All variables have behaved in a similar manner as they did during the study. However, IIP has performed differently during the initial and last sub-periods as the positive relation between CPI and IIP has been significantly established, and we can conclude that normalized relation between IIP and CPI was positive during the first and second sub-periods.

Vector Error Correction Model The discussion so far has depicted that the variables in question were related through co-integration. In the VAR systems when such Error Correction Terms were present, it leads to the VECM. The equations in Table 19.6 present the estimated equation for CPI in VAR accompanied by the cointegrating component. The long period relation between cointegrating component and change in CPI was negative and significant, meaning thereby that there was converging relationship among variables. But such an effect becomes insignificant subsequently as the coefficient attached to ΔCPI_{t-2} was negatively significant. The impact of supply

of money on inflation was positive even in the subsequent period but insignificant. After a gap of one-time horizon, IIP has more effective and negative impact on CPI. Similar was the case for change in import variable on change in CPI as the coefficient of changes in import variable was positive, but it turned out to be negatively significant in $(t - 2)$ time period. Hence, we can say that the inflation reducing the impact of change in imports could appear only after a time horizon.

It further reveals the results of ECM for change in CPI for (1980–1990) under study. ECM component is represented by Z. ECM component variable is significant with negative coefficient, meaning thereby that long period relationship of cointegrating components with a change in CPI is converging and stabilizing.

Table 19.6 ECM equation of CPI, monthly data

A. (January 1980 to Dec 2016)	
Δ CPI = 0.6274*	- 0.0073* Z + 0.304* Δ CPI _{t-1} - 0.114* Δ CPI _{t-2} - 0.0283* Δ IIP _{t-1} - 0.0503* Δ IIP _{t-2} +
(7.232) (2.384) (6.153) (2.222) (2.701) (4.797)	
0.0003 Δ IMP _{t-1} - 0.0004* Δ IMP _{t-2} + 0.0008 Δ MS _{t-1} + 0.0002 Δ MS _{t-2}	
(0.639) (3.2576) (1.434) (0.03915)	
Z is a cointegrating component; R ² = 0.44; N = 444; F-Statistic = 15.661 *	
B. (January 1980 to December 1990)	
Δ CPI = 0.1862* - 0.0607* Z + 0.3160 Δ CPI _{t-1} + 0.0414 Δ CPI _{t-2} - 0.0051 Δ IIP _{t-1} - 0.0133 Δ IIP _{t-2} -	
(3.5475) (3.967) (3.4843) (0.486) (0.6239) (1.7299)	
0.0015 Δ IMP _{t-1} + 0.0002 Δ IMP _{t-2} + 0.0212* Δ MS _{t-1} + 0.0088 Δ MS _{t-2}	
(1.3836) (0.0783) (2.0283) (0.9376)	
Z is cointegrating component; R ² = 0.43; N = 132; F = Statistic = 7.581 *	
C. (January 1991 to December 2000)	
Δ CPI = 0.2446 - 0.0086 Z + 0.4975* Δ CPI _{t-1} - 0.2290* Δ CPI _{t-2} - 0.00241 Δ IIP _{t-1} - 0.0305 Δ IIP _{t-2} +	
(1.5968) (0.717) (4.972) (2.1904) (1.0554) (1.5156)	
0.0001 Δ IMP _{t-1} + 0.0009 Δ IMP _{t-2} + 0.0026 Δ MS _{t-1} + 0.0056 Δ MS _{t-2}	
(0.1203) (0.8479) (1.9860) (0.7597)	
Z is cointegrating component; R ² = 0.37; F = 4.1123 * N=	
D. (January 1, 2001 to December 31, 2016)	
Δ CPI = 0.755 + 0.0290 Z + 0.0285 * Δ CPI _{t-1} - 0.0816 Δ CPI _{t-2} - 0.017 Δ IIP _{t-1} - 0.048* Δ IIP _{t-2} +	
(0.384) (1.529) (3.710) (-0.973) (0.938) (-2.296)	
0.0011 Δ IMP _{t-1} + 0.001 Δ IMP _{t-2} + 0.0012 Δ MS _{t-1} - 0.0002 Δ MS _{t-2}	
(1.285) (0.775) (1.9880) (-1.23)	
Z is cointegrating component; R ² = 0.34; F-Statistic = 4.05 *; N = 192	

* Indicates the significant values

Figures in parenthesis are T-values

Source Computed by the Researcher

Impulse Response Function (IRF) Recognizing the relative importance of one variable in comparison with other variables is done using the vector error correction model.

The CPI variable's one standard deviation innovation response time path to the variables in the VAR system is shown in Fig. 19.1 for the whole study period. The response of CPI to CPI is positive for up to two-time frames, after which it starts to decline in a stable economy. The impulse response of CPI to IIP variable was unstable as it shows a declining tendency for three time periods and it subsequently increasing for the rest of the time period. One Standard Deviation innovation to the money supply variable puts a little pressure on CPI up to four-time horizons, and after that, it starts converging towards normality. So, we can conclude that money supply, import and CPI have stable relation with CPI. However, this relationship was unstable with IIP.

This shows the impulse response of CPI to all other variables in the system for the first sub-period. It reveals that the response of CPI to CPI was positive up to three-time horizons and after that it was declining which was similar to the overall study period. The impulse response of CPI was little different to IIP as it is declining up to three-time horizons and after that converging towards normality. The impulse response of CPI to import variable is normal throughout and that of money supply is declining from the beginning till the end.

The CPI responds positively to one standard deviation innovation to CPI up to three-time horizons and after that starts declining and moves towards normality. The CPI to IIP was declining for three-time periods and then increasing for a little while and moving towards normality. The response of CPI to import variable is normalized throughout and that of money supply it was little positive for three-time horizons and then moving towards normality.

It shows that initially up to two-time horizons the response of CPI to CPI was positive and of high degree and later on still remains positive but with low degree. The impulse of one standard deviation to IIP brings CPI down for three-time horizons but then starts converging towards normality. The response of CPI to import variable was declining however with money supply it was stable throughout the study period.

19.5 Concluding Remarks

The research shown above illustrates how inflation and other pertinent variables evaluated using the Vector Error Correction model behave. Inflation, measured through CPI, has witnessed an increasing trend with large instability over various sub-periods. Every successive sub-period has recorded a higher level of average inflation and instability than before. Hence, inflation in India was less stabilized during the prior to the reform periods as compared to the after reform period. Other relevant variables (IIP, money supply, imports) which have their, direct or indirect, relationship with inflation were also found to be behaved in a similar manner.

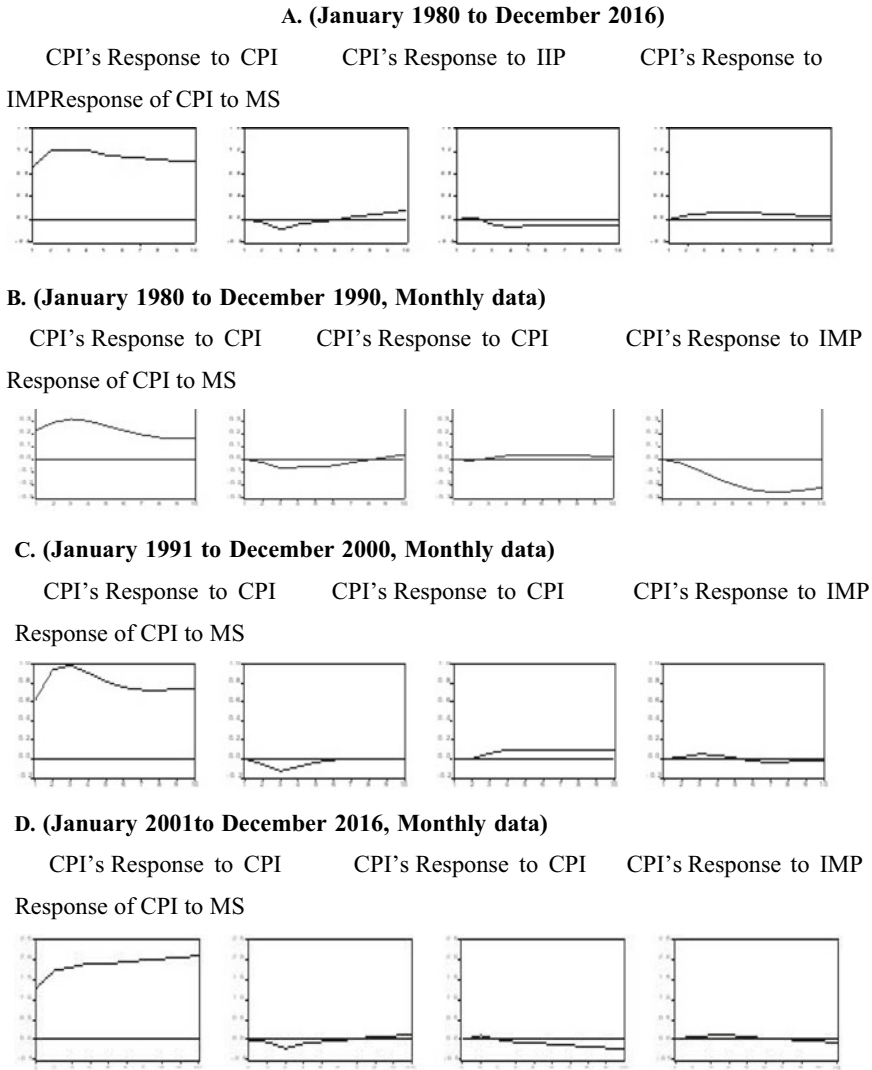


Fig. 19.1 Impulse response function

Therefore, the Indian economy was showing evidence of instability along with the growth trajectory over successive time segments.

The macroeconomic variables may display one-way and two-ways causation between them. Such causal connections helped us to understand the depth of relationships. In comparison with the post-reform and subsequent periods, the Indian economy grew very slowly during the pre-reform period. Accordingly, IIP did not emerge as a cause for decreasing inflation; however, inflation was causing some

effects on IIP. This causal connection persisted after (1991–2000). This relationship was bidirectional during (2001–2016). Here, the effect of improvement in IIP started reflecting on the performance of the inflation variable.

In comparison with post-reform times, the money supply grew at a somewhat lower rate during the pre-reform time. Inflation did not occur during the pre-time due to the money supply. The nature of this relationship did not change during (1991–2000). However, throughout the subsequent era (2001–2016), this causal relationship appeared to be bidirectional, meaning that both the money supply and inflation were driving changes in it. The first and second time periods did not show a causal relationship between imports and inflation. But, during the last period, it was not true.

A positive association between the money supply and inflation has been found using a normalized co-integration relationship that normalizes for the CPI and measures long-term relationships. IIP, instead of playing its role to control the inflation, affected it another way round during the first sub-period under study. However, IIP was effective in controlling the inflation during the post-reform and subsequent periods, so far long period relationship is concerned. Imported inflation could become an effective variable during the subsequent period after being ineffective for pre- and post-reform periods.

Indian inflation is positively influenced by the previous period's inflation. Besides, it has also been proved that inflationary shock at one time sustains for some period before being normal. Money supply and inflation showed a high dynamic link (short-term association). For a while, the inflation was favourably impacted by the shocks to the money supply variable before returning to normal. Any injection to IIP variable has an unstable relationship with inflation.

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Part V
Economics, Finance and Accounting

Chapter 20

Counteracting Tax Optimisation: The Case of the Polish Minimum Tax



Olga Mikołajczyk and Joanna Szlęzak-Matusewicz

20.1 Introduction

Being the fundamental tool of the financial system, taxes take on a revenue and regulatory, as well as motivational role. However, they may also adversely affect the economic standing of business entities, as they erode the purchasing power of those liable to tax (taking away a part of funds they have generated). They may also disrupt the market mechanism. These effects, referred to as income- and substitution-based, depend on the tax system structure, type of tax tariffs and the tax rates. In addition, due to the volatility and uncertainty of the tax legislation, taxes will always be seen by the taxpayers as risk and welfare insecurity factors. In other words, it is of no surprise that firms manifest natural defence mechanisms. Thus, it can be assumed that tax is a parameter of choice for firms. After all, firms can use it to gain competitive advantage and to improve their business effectiveness. It follows that if an entrepreneur becomes engaged in a given business, they cannot afford to ignore tax solutions in their decisions.

In this context comes the importance of the taxpayers' legal activities aiming to reduce taxes in taking advantage of any opportunity at hand provided by the tax law. Such activities may involve making the most out of the tax law (tax preferences), searching for loopholes in the tax law, postponing tax payments and engaging in tax arbitration (using differences in tax regulations). There is also an issue of how the taxpayer's activities should be judged, in particular, whenever the tax regulations used are ethically and legally questionable.

In recent years, aggressive practices of taxpayers striving to reduce the tax burden and the accompanying efforts to combat them on the part of various governments (of

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EU Member States, in particular) have become ever more conspicuous. It is a natural reaction—to defend budgetary income, measures are implemented to prevent the escape of funds. Sometimes, however, as in Poland, the central authorities abuse the right to legislate on taxes by introducing principles, norms and provisions which aim not only to combat aggressive practices, but first and foremost to restrain entrepreneurship.

In this article, the focus is on such activities as part of the Polish tax reform of 2022. This article aims to present the instrument that the minimum income tax is and its impact on restraining entrepreneurship in Poland.

20.2 Two Sides of Tax Optimisation

Taxes have always been around, and they have always been resented by those who had to pay them. It is a natural reaction to the state interfering with the citizen's personal finance. It may be so, because it is difficult to capture the direct objective of spending the funds from taxes. The very definition of a tax shows that it is gratuitous, so the taxpayer should not expect anything in return for paying taxes. This, in turn, is in conflict with the human nature. Any time we pay, we expect something in return.¹ That is why taxes provoke social resistance.

There are two fundamental forms of tax resistance in the literature² and in the works of legal authors: tax evasion and tax avoidance.³

Tax evasion involves undertaking activities prohibited by the tax law and aiming to lessen or to eradicate the tax burden. These activities are illegal, unethical and in conflict with the law, and once undertaken, they involve relevant penal sanctions. Such activities include, for instance, concealing sources of income, falsifying tax records or recording costs that have not been incurred.

It is much harder to define the term of tax avoidance, as there is a great deal of subjectivity in how this phenomenon is viewed. It may be viewed from two perspectives. In terms of legality, tax avoidance is legal. In this respect, it is perceived as a positive activity which involves the reduction of the tax burden with the help of instruments permitted by law. This activity is not unethical, much as its consequence is the reduction of the tax burden, as in the case of tax evasion.⁴ Thus, this activity is legal, undertaken as allowed by the applicable law. The term of tax avoidance has

¹ Szlęzak-Matusiewicz (2013), p. 13.

² Cf. e.g.: Gomułowicz and Mączyński (2016), p. 379.

³ Apart from those, tax savings are also brought up as a **taxpayer's passive activity which involves abstaining** from certain activities which give rise to a tax obligation in order to reduce the tax burden. Abstaining from selling goods and services comes as an example. It follows that it is not a form of actively affecting the amount of taxes paid: not willing to pay a tax, the taxpayer will not undertake any activity generating a tax obligation (cf. Gaudement and Molinier 2000, p. 585).

⁴ Cf. e.g.: Gomułowicz and Mączyński (2016), p. 379.

been adopted in the case law.⁵ For instance, one of the decisions of an administrative court reads as follows: *tax burden may be lessened by legal means, with the use of the components of a given tax (reliefs, exemptions, deductions, etc.). Such an activity on the part of the taxpayer is called tax avoidance, and it is construed as acting with the use of legal measures, aiming to reduce the tax or even to avoid it (tax saving).*⁶ Tax avoidance is legal so long as the tax law is not abused. In this way, tax avoidance which involves the abuse or circumvention of the tax law will be illegal. The boundary between the legal and the illegal is first and foremost set by the general anti-abusive clause. Its very name—anti-tax avoidance clause—clearly defines tax avoidance as a negative phenomenon. At the same time, it must be noted that this clause is related to the distinction between tax evasion and tax avoidance. It is also Dzwonkowski who points this issue out. In his opinion, much as the former is illegal, the latter, given its very legal character precisely, must be restrained by means of a clause. This relation is observable in the legal languages of a number of laws (*General Anti-Avoidance Rule*).⁷

Assuming that tax avoidance is legal, whereas tax evasion is not, tax optimisation will surely be among the activities referred to as tax avoidance. There are also other concepts associated with tax optimisation, such as tax planning or tax management. In essence, they do not fundamentally differ from tax optimisation itself, much as they are broader concepts, as the literature shows. Tax management relates to the totality of the taxpayer's business activities, and it should be a fixed element of their financial policy, thus affecting not only the minimisation of the tax burden, but also the minimisation of the costs of tax payment⁸ or, for that matter, the increase of a given entity's financial liquidity. This way, tax management is a continuous process which takes account of a given entity's internalities (e.g. development plans, investments, sales level, headcount) and externalities (e.g. economic situation on a given market, changes in legislation, including in tax laws).⁹

The concept of tax optimisation has not been given any normative definition. In the field of taxes, it is most often used intuitively to define the activities of taxpayers who aim to minimise the tax burden.

One may say optimisation is an activity which

1. is legal;
2. involves a choice of transactions/instruments/methods of conduct/solutions;
3. aims to minimise tax burden.

⁵ A. Werner, *Pojęcie planowania i optymalizacji podatkowej*, **Studia i Prace Kolegium Zarządzania i Finansów**.

⁶ Judgement of the Provincial Administrative Court [*Wojewódzki Sąd Administracyjny – WSA*] in **Wrocław of 21**.

⁷ H. Dzwonkowski (ed.). *Ordynacja podatkowa*. Komentarz, CH Beck, Legalis, after: Olesińska (2013), p. 22 et seq.

⁸ The nominal tax burden and the costs of tax payment are referred to as tax expenditures. More to that: Poszwa (2007), p. 11.

⁹ Szlęzak-Matusewicz (2013), p. 17.

Tax optimisation does not have any negative implication. What is more, this concept is to emphasise the legality of actions pertaining to the planned minimisation of the tax burden.¹⁰ Thus, it has to be categorically stated that effective tax optimisation is a natural and sound behaviour from the point of view of an entrepreneur striving to generate financial benefits from their business.¹¹ It is because the taxpayer is entitled to plan their tax liabilities optimally, if in line with the legal provisions.¹²

Enjoying the freedom to avoid taxes is acceptable as long as the taxpayer does not abuse that freedom. The phenomenon referred to as “tax law circumvention” or just tax avoidance (in the pejorative sense) must not be seen as equivalent to tax optimisation much as, in certain cases, the division line may be blurred. In the literature and the works of legal authors, circumvention of the tax law is defined as actions of the participants of economic transactions which aim to evade taxes due to the freedom they have in creating the contents of legal transactions.¹³ Thus, one might venture to say that such actions are legal, unlike tax evasion, which is illegal.¹⁴ It is emphasised in the literature that transactions aiming to circumvent the tax law are artificial, unnatural, ineffective, and even useless from the economic perspective. They will often be highly complex, non-transparent and lengthy, which aims to hinder their proper assessment by the tax authorities.¹⁵ It needs to be kept in mind that tax circumvention arises when the taxpayer undertakes activities permitted by law to achieve a purpose the law does not accept.¹⁶ A normative definition adopted by the Polish legislature (tax avoidance) is included in the Tax Ordinance. Under Article 119a(1) of Tax Ordinance, it is a transaction (or a number of various transactions among various entities) performed first and foremost to attain a financial benefit which, under the circumstances at hand, is contrary to what the law pertains to and what it aims to achieve. If the taxpayer’s activity is artificial, the latter will not produce any benefits.

In practice, the conceptual grid for defining law abuse is very broad. For instance, the documents of the European Commission and the European Parliament refer to this phenomenon most of the time as aggressive tax planning.¹⁷ In Poland, it is customary to refer to tax avoidance (e.g., anti-tax avoidance clause), aggressive tax optimisation or harmful tax optimisation.¹⁸ In the broadest sense, the difference between tax optimisation and illegal practices lies in the former being in concert

¹⁰ Ladziński (2008), p. 18.

¹¹ Wyrzykowska (2006), p. 7.

¹² *Ibidem*, p. 8.

¹³ Mastalski (2005), p. 7.

¹⁴ Krzywoń (2011).

¹⁵ Stanik and Winiarski (2011), p. 19.

¹⁶ Judgement of the Constitutional Court of 11 May 2004, K 4/03, OTK-A 2004, no. 5, item 41.

¹⁷ The concept of aggressive planning was defined in the Commission Recommendation of 6 December 2012 on aggressive tax planning. In accordance therewith, aggressive tax planning consists in taking advantage of the technicalities of a tax system or of mismatches between two or more tax systems for the purpose of reducing tax liability [Commission Recommendation of 6 December 2012 on aggressive tax planning (2012/772/EU)].

¹⁸ Gajewski (2015), pp. 63–80.

Table 20.1 Forms of tax resistance and their compliance with the contents and the purpose of the statute

Activities	Compliance with the contents of the statute	Compliance with the purpose of the statute
Tax evasion	No	No
Tax optimisation, tax planning, tax management	Yes	Yes
Law abuse, tax law circumvention, harmful, aggressive tax optimisation	Yes	No

Source Author's own analysis

with the contents and the purpose of the statute, and the latter breaching the purpose of the statute (cf. Table 20.1).

20.3 Minimum Tax as an Element of the Polish Tax Deal

The Polish Deal is a set of amendments to tax statutes which, for the most part, came into force in Poland in 2022. Although in the government's official narrative the Polish Deal comes out as a historic reduction of taxes and a package of tax relief, still, many of the amendments will rather yield a higher effective tax burden, and the change management is a challenge the entrepreneurs face.

As shown in the explanatory memorandum to the amending act, *the introduction of minimum tax provisions to the Corporate Income Tax Act (hereinafter: the CIT Act) is to bridge the CIT gap which arises from an artificial transfer of profits to other countries by enterprises, in particular, international corporations. A situation where each year taxpayers generate and recognise very low income on operating activities or, over a longer horizon, incur a respective loss, is often not only inadequate to the scale and type of business pursued (as those will largely include taxpayers posting high turnover), but also unacceptable from the perspective of the reality of market economy. It is because an entity incurring losses should not, in the long term, operate on the market. However, if in spite of the identified factors (i.e. permanent tax loss or the recognition of a very low income), the taxpayer continues their business, it may show that optimisation measures are being applied. Thus, from the state budget's perspective it was necessary to introduce regulations aiming to minimise such practices, if any, which may give rise to lower tax liabilities due to understating the tax income. The regulations were expressed as alternative CIT (minimum income tax) being introduced to the CIT Act.*

CIT payers based or having management on the territory of the Republic of Poland will be required to pay the new tax, along with tax groups which, in the tax year:

- incur a loss on the source of revenue other than capital gains; or

- obtain from the source of revenue other than capital gains a share of income in revenue other than from capital gains no higher than 1%.

The new tax will also be binding on non-residents engaged in business operations through a foreign permanent establishment located in the Republic of Poland to the extent the revenue and the losses pertain to the establishment's business operations.

It is important to note that the above criteria are the only ones to define the payers of the new minimum tax. There are no additional criteria whatsoever addressing the level of revenue generated, the assets at hand or the headcount. It means that the smallest entities will pay the minimum income tax as well, if they lose or fail to reach profitability above 1%. Taxing entities which fall short of a certain profitability level will make the new tax particularly adversely impact low-margin companies.

The minimum tax provisions introduced to the CIT Act also allow for quite a wide list of entities exempt from this tax. It includes taxpayers who have a status of a financial enterprise. The tax rate is 10% of the taxable base. In turn, the taxable base is typically 4% on the value of revenue other than from capital gains. The taxable base also comprises costs of advisory services, market research, advertising services, management and control, data processing, insurance, guarantees and sureties, as well as similar considerations made directly or indirectly in favour of related entities or entities based in countries of harmful tax competition.

It should be noted that calculating the taxable base for the minimum tax is an extremely breakneck task. It is also worth pointing out it is not only a certain percentage of revenue but also some cost categories that make up the taxable base. What is more, there are two mathematical formulas (skipped in this article) that should be applied to arrive at the taxable base.

The minimum tax paid for a given tax year may be deducted from the income tax. Deductions are made in tax returns for three consecutive tax years immediately following the year for which the taxpayer pays the minimum income tax.

20.4 The Consequences of the Minimum Tax

The minimum income tax was assumed to prevent an increasing foreign gap in CIT which resulted from the artificial transfer of profits, mainly by international corporations, to other countries.¹⁹ However, the new tax pertains to every company which incurs a tax loss or generates an income no higher than 1% of revenue, whether the profits are transferred abroad or not. Its introduction is an important barrier in the development of entrepreneurship in Poland.

¹⁹ The explanatory memorandum to the draft act amending the Personal Income Tax Act and Corporate Income Act, and certain other acts, <https://legislacja.rcl.gov.pl/projekt/12349409/katalog/12805475#12805475>.

20.4.1 Situation of the Polish Enterprises Following the Introduction of the Minimum Tax

The minimum tax will particularly severely affect low-profitability industries, and, consequently, it may entail a serious deterioration of the firms' standing, and even bankruptcy. It is the car dealers and FMCG retailers that perceive the minimum tax as a threat to their business. The tax also raises controversy among grocery and specialist wholesalers who account for 900 such entities in Poland.

The provisions drafted by the Ministry of Finance do not allow for differences in profitability with respect to individual economy sectors, size of the business or the headcount. Consequently, numerous retailers and wholesalers have suspended investment and development projects. Being hard to anticipate, the results of such taxation entail management paralysis, as well as lower appeal from the point of view of investors. Such circumstances may contribute to lay-offs and bankruptcies of some of the Polish companies. Foreign networks taking over the market are to be reckoned with as a result of devastating the supply chains.

The analyses show that 20% of the largest CIT payers will pay the minimum tax. Firms with Polish capital account for more than a half of the entities with profitability lower than 1%.

The minimum income tax may represent an important factor propelling reduced company growth. Entities incurring tax loss will have a lower capacity to maintain financial liquidity and to bear R&D expenses. There is also a serious risk of a rising debt of such companies as a result of having to pay tax liabilities on time.

Moreover, the discriminatory load of the tax should also be taken into account. The point is that for low-margin or loss-making enterprises, the effective tax rate will be incomparably higher than for profitable enterprises (as high as 84%). Many entities may be forced to wind down due to the higher tax burden. In turn, a lower number of entrepreneurs in competitive and low-margin industries will enable others to impose price terms and, ultimately, shift the higher tax to customers.

The minimum income tax may represent an important burden, hence, the entrepreneurs will be looking for ways to avoid paying it. The entities whose income slightly exceeds 1% of their revenue may attempt to skip some costs in order to inflate their taxable income above the 1% revenue level. A rise of profitability from 0.9% to 1.1% may entail not only a lower effective tax rate, but also, in spite of a higher income generated, a chance to pay a lower tax. Such a form of taxation means that entrepreneurs with similar levels of income can pay significantly different amounts of tax—a taxpayer with a higher margin will be charged lower income tax. This way, unequal treatment emerges, which confirms the thesis of this tax having a discriminatory component and of a failure to respect the fundamental principle of tax equality.

An entrepreneur willing to avoid the minimum income tax will be forced to include costs at a relevant level as early as in monthly withholdings. If it is only in the annual return that the taxpayer decides to adjust the costs in order to avoid the minimum

tax, they will run the risk of such an action being challenged by tax authorities and qualified as circumvention of anti-tax avoidance provisions.

Taxpayers may also decide to shift indirect costs to subsequent settlement periods, which will allow them to improve profitability and to avoid the minimum tax, as well as to lower the taxable base in the following period. This, in turn, causes business irrationality driven by tax avoidance.

An alternative solution is to recognise the gross income earlier. However, it is important to properly settle the accounts with a counterparty for the tax authority not to challenge such transactions as pretence aiming to circumvent minimum income tax provisions.

Groups of companies may change the settlement terms, which will give rise to minimum income tax avoidance. However, one should keep in mind that a change in transfer pricing must have its business rationale. Otherwise, such transactions will be challenged by the tax authority. It mainly concerns settlements with a foreign entity.

A higher tax burden caused by the minimum tax being introduced may give rise to shifting the burden of additional expenditure to customers. Striving to maintain their profitability, entrepreneurs may increase the prices of products, goods or services they offer. In such an event, the costs of the minimum tax will be incurred by the consumers.

Taxpayers may also shift their expenditure to later periods in which they expect higher gross income. However, skipping costs in the tax year which carries a risk of minimum tax coming into play may produce business problems, as activities helping the entrepreneur to maintain the competitive advantage are postponed.

It is difficult to clearly indicate what the financial consequences of taxing enterprises with the minimum tax will be, because this tax has not actually been implemented in Poland yet. Due to many petitions by business organisations to abolish this tax, the Polish government decided to suspend the unfavourable regulations until the end of 2024. For this reason, it will be possible to say about the real consequences of this tax only in 2025. Therefore, the authors will certainly continue research on the impact of this tax on the activities of enterprises.

20.5 Conclusions

The legislature maintained the aim to impose tax on loss, and low margin was to combat aggressive tax optimisation and profit transfer among various entities, in particular those whose parent entity is based abroad. However, the final version of the minimum tax regulations applies to all entities, notwithstanding where the parent entity is based. It follows that the minimum income tax is an additional levy which affects entrepreneurs, whether they have international group relations or not.

The *Tax Foundation* think tank develops tax system rankings, *International Tax Competitiveness Index*, for 37 countries of the Organisation for Economic Cooperation and Development. In 2021, the Republic of Poland came in second worst, with only Italy faring worse. With respect to tax system complexity, Poland occupies the

last position. As the Polish Deal took effect, numerous interpretative doubts arose. Intricate regulations put a strain on the taxpayers, which may impact their decisions whether to start and continue business operations, affecting the economic growth of the country.

Next to numerous unfavourable solutions introduced beginning 2022, the minimum income tax is one of the furthest reaching changes which have provoked strong emotions among entrepreneurs and could entail dire consequences for Polish entities.

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Chapter 21

Financial Socialisation and Personal Financial Management Behaviour of Millennials in India: The Role of Attitude Towards Money and Financial Literacy



Kirti Goyal

21.1 Introduction

The economy puts a lot of pressure on young people. US youth are also financially illiterate (Lusardi et al. 2010). Policymakers, educators, and others have supported a variety of financial knowledge delivery initiatives to help young people make smart financial decisions. Financial literacy increases prudent financial management. Personal Financial Management Behaviour (PFMB) integrates all financial interests. These include risk management, estate, retirement, cash flow, investment, and tax planning (Altfest 2004, p. 54).

Having more money hasn't improved people's money management. Financial stability requires careful money management (Riitsalu et al. 2018; Xiao 2008). Managing money includes setting a daily budget, saving and investing for future needs (buying a home, car, or education), and ensuring stress-free retirement (Kidwell and Turrisi 2004; Copur and Gutter 2019). PFMB tracks income and uses funds to cover costs using a financial plan (Lee et al. 2019). Good financial planning improves long-term financial satisfaction, quality of life, relationship satisfaction, and financial resilience (Mugenda et al. 1990; Scannell 1990; Titus et al. 1989; Dew et al. 2020; Bharucha 2018; Burns et al. 2008; Barya-Matejczuk et al. 2020; Lusardi 2020).

Legislators, government, experts, and educators collaborate to help sane people make better financial decisions. Psychological factors affect financial decisions, as behavioural economics recognises (Hilgert and Hogarth 2003). Insufficient saving, excessive debt, and aggressive trading lead to "sub-optimal" decisions.

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Loan defaults have garnered attention, especially in developed nations, since the global financial crisis. However, Indian policymakers and regulators must address the issue because both priority and non-priority banks have asset quality issues (RBI Annual Report). Given the shift in global finance away from the USA and EU and rising developing market interest, financial management practices must be examined. 84% of an Indian family's wealth is in real estate, 11% in gold, and 5% in financial assets (RBI 2017). In developed countries, families save more for retirement. Demographic and financial factors explain few differences. Finances explain the rest.

India has over 65% of its population under 35, unlike western nations (2011). Young workers boost turnover and economic growth (Bapat 2020). PwC calls millennials those born between 1980 and 2000 (2011). Millennials are born between 1981 and 2000, according to the BLS. Millennials are more economically active but also more frugal. Age affects money management. Experience, but not youth, improves elders' financial management (Topa et al. 2018). Since young people are building wealth, their money decisions will affect them for life. They're likely tech-savvy and online. Young people have more debt, undersave, and invest poorly (Allgood and Walstad 2013; Adzis et al. 2017; Norvilitis and Maclean 2010; Lusardi et al. 2011). Credit offers tempt them due to their overprotective upbringing (Herbig and Borstorff 1995). Due to their financial ignorance, youth must make wise financial decisions (Chen and Volpe 1998). PFMB learning should begin in infancy as part of parental financial modelling and family financial socialisation to promote financial discipline (Fulk and White 2018; Shim et al. 2010). Financial literacy is essential for school, college, and workforce kids (Bapat 2020). Some academic papers question financial literacy for youth (Reyers 2019). Despite a lot of research on financial education programmes' effectiveness (Mandell and Klein 2009; Collins and O'Rourke 2010; Walstad et al. 2010; Xiao and O'Neill 2016), these interventions have little or no effect on financial behaviour (Willis 2008; Fernandes et al. 2014). Thus, PFMB's variables, including financial literacy, must be studied.

Research must address component-PFMB relationships. Money attitudes affect financial literacy and PFMB (Barbić et al. 2019; Bapat 2020). Financial socialisation affects FL, so first examine the mediating relationship between financial socialisation, financial behaviour, and FL (Shim et al. 2010). FL's effects on money-related attitudes and PFMB are inconsistent. FL usually makes the relationship stronger and weaker (Eagly and Chaiken 1993). However, FL can weaken the attitude-behaviour link when it is high (Barbić et al. 2019). Such findings encourage more research (Goyal et al. 2021).

This article suggests PFMB determinants. We propose a model in which millennials' PFMB is jointly determined by cognitive, social, and psychological factors (e.g. attitude towards money).

21.2 Contribution of the Study

There are worries about the success of financial literacy and education initiatives now that the majority of young people appear to have completed their formal education. Not only that, but numerous studies have shown that financial education programmes for youth have lasting benefits (Hastings et al. 2013; Fernandes et al. 2014). Prior research has examined both subjective and objective forms of financial expertise. Accurate identification of social and psychological PFMB determinants is crucial for consumers' overall well-being and financial success. This research makes three significant contributions. Our research begins with standard theories of human growth and change in order to construct a conceptual model of the variables impacting millennials' PFMB. As a second step, we propose a framework to illustrate the interplay among financial upbringing, mentality, and PFMB. This study proposes the interaction of financial literacy with psychological disposition as a means of examining whether cognitive ability (financial knowledge) modifies the relationship between attitude towards money and PFMB (attitude towards money). The proposed model can be used to evaluate, tailor, and improve financial education programmes with the goal of encouraging responsible financial behaviour among millennials.

21.3 Theoretical Framework

According to Danes (1994), gaining a broad financial education is more important than gaining market competence. Cognitive development refers to the process of learning and practising the beliefs and practices that underpin a culture's economic viability and its members' quality of life (p. 128). We provide a model of financial socialisation that links the financial knowledge and skills acquired by young adults with the anticipatory financial socialisation they receive in their formative teenage years. Then, the millennial generation's future financial management abilities can be predicted based on their attitudes. In order to create our conceptual framework, we looked to Ajzen's (1991) theory of planned behaviour and Moschis's (1987) theory of consumer socialisation. In order to comprehend the process by which today's youth amass their financial literacy, the theory of consumer socialisation can serve as a useful framework. This framework also reveals how socialisation agents can serve as a source of financial education for adolescents. The outcomes of the students' interactions with one another affect their learning, which in turn affects their attitudes and actions. Hess and Torney (1967) propose that children engage in anticipatory socialisation when they adopt characteristics associated with adult roles. The child might not see the value in these traits right now, but they could come in handy down the road. Anticipatory financial socialisation is defined in this study as the acquisition of financial knowledge, skills, attitudes, and behaviours from key socialisation agents such as parents, school, and the workplace while participants were still teenagers living at home.

In terms of socialisation, few things are as influential as what children learn from their parents and loved ones about money and how to handle it. Many children learn about finances and money management unintentionally (through participation and observation), but parents can also teach these skills intentionally (Moschis 1987; Shim et al. 2009; Koh and Lee 2010). To be more precise, Jorgensen and Savla (2010) found that the extent to which young adults (aged 18–29) believed their parents influenced their attitude towards money had a direct impact on that attitude, and that attitude in turn had an indirect impact on the young adults' actual behaviour concerning money. When taken together, these pieces of evidence show that parents can and do have a major impact on their children's financial outlook and behaviour. To what extent this matters in the light of other considerations is, however, still unknown. In addition to people, institutions can play the role of "socialisation agents" as well. Peer pressure and the media (newspapers, TV, internet, etc.) begin to have an effect as a child matures. To begin, learning about money from one's peers is widely recognised as an important strategy in and of itself. According to studies conducted by Moschis and Churchill (1978), children tend to adopt the materialistic values and social motivations of their peers. When compared to their older contemporaries, Lin and Lee found that those under the age of 30 were more likely to ask their friends for investment advice if they felt they knew less about the subject. Researchers Loibl and Hira (2006) found that male employees were more likely to learn about financial planning from their male co-workers.

Second, the media has a significant impact on how people become financially literate and make decisions about spending and saving, as well as investment choices. Consumers can find products that provide more bang for their buck if they do their research (Punj and Staelin 1983). They might end up being more satisfied with their choices and acquisitions. Lin and Lee found that consumers' knowledge, risk tolerance, age, and income level were strongly correlated with their reliance on the media as a source of information. Lee and Cho's (2005) research looked at the effects of consumers' use of information intermediaries and their habits of financial market exploration. As a result of their research, they learned that many consumers read promotional materials to learn about the economy and finance. About half of the people who heard the presentation were people who had paid for some sort of information or advice. Rhine and Toussaint-Comeau (2002) found that newspapers and magazines were the most popular sources of financial information for low-income and less-educated investors.

Learning about money can be accomplished in two ways: through schooling and through experience. Children learn from their parents' example of how to handle money. Work and academic experiences are both part of a person's formal education. People learn from the examples set by the people they spend the most time with, especially their parents (Bandura 1986; Moschis and Churchill 1978). Knowledge-based cognitive learning, on the other hand, would be the result of a formal education received at a university or through the course of employment.

An individual's PFMB can be influenced by their attitude towards the behaviour, their subjective norms, and their perception of their own behavioural control, and the theory of planned behaviour (Ajzen 1991) provides a framework for understanding

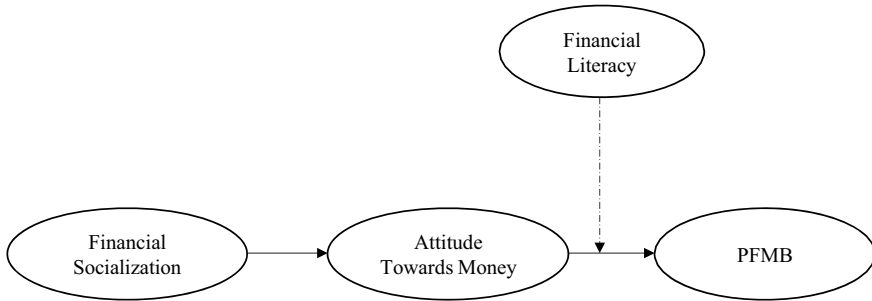


Fig. 21.1 Conceptual framework of the study

these relationships. Using Ajzen's theory, Shim et al. (2009) found that many aspects of students' financial well-being and financial behaviours were significantly correlated with students' perceived behavioural control, attitudes, and parental subjective norms. Additional studies have shown that a person's behaviour is heavily influenced by their own sense of control and the way they perceive their own abilities to influence outcomes (Danes and Rettings 1993; Thompson 1981). Furthermore, this sense of control is likely to account for some of the potential practical limitations and provide an accurate representation of the available resources and opportunities (Ajzen and Madden 1986). Since the vast majority of millennials depend on their parents for financial support during this transitional period, we can expect that millennials' positive financial attitudes will correlate with a positive financial relationship between them and their parents, as well as their financial well-being and healthy financial behaviour (Schoeni and Ross 2005). The proposed conceptual framework is displayed in Fig. 21.1.

Due to its significance in disclosing financial choices or behaviours, financial literacy has recently been the focus of behavioural finance research. People who are financially literate are more likely to make sound decisions about their money, both short term and long term, because they comprehend fundamental financial concepts, financial goods and services, and appropriate attitudes and behaviours. Numerous studies, including those by Hassan Al-Tamimi and Anood Bin Kalli (2009), Shahrabani (2012), Lusardi and Mitchell (2017), and others, have shown that the vast majority of people lack the financial literacy required to make sound financial decisions. Higher levels of borrowing, greater obligations and volatility in people's professional and social lives, challenges surrounding social security concerns, and longer life expectancies all contribute to the growing importance of financial literacy. Governments have launched financial education programmes in response to rising personal bankruptcy filings, reports of high credit card debt, and low and negative savings rates (Bernheim et al. 2001). According to studies conducted on the topic, early exposure to financial education may have an effect on long-term fiscal habits. A study conducted by Bernheim et al. (2001) found that participants in the highest income bracket (those between the ages of 35 and 49) who had received personal financial education were more likely to engage in responsible financial behaviour.

Studies that focus on measuring financial literacy may be able to claim higher correlations with financial actions than other types of studies (Fernandes et al. 2014). Increases in financial literacy have been linked to better financial decisions by both Grable et al. (2009) and Perry and Morris (2005). A recent study found that financial attitude and knowledge have a positive and statistically significant impact on financial management behaviour (Agustina and Mardiana 2020). Similarly, a different study found that kids who were taught about money had more positive attitudes and behaviours related to money (Aydin and Selcuk 2019). Al Kholilah and Iramani (2013) found the opposite to be true regarding the impact of financial literacy on consumer decisions.

The social cognitive theory is one explanation for behaviour change that incorporates ideas from the cognitive, behaviourist, and emotional models (SCT). It states that in order to engage in a behaviour, one must have the ability to do so. This means that the individual is cognizant of the nature of the behaviour as well as its proper execution. People are urged to engage in “self-reflection”, “self-regulation”, and “self-organisation” in accordance with the “model of human agency” it proposes. A person’s ability to participate in an activity is evaluated using SCT by considering both individual and contextual factors, as described by Martin et al. (2014, p. 2). It regulates behaviour and alters one’s mood (Bandura 1986). We anticipate that financial literacy, which has a significant impact on millennials’ financial behaviour, will weaken the link between their financial mindset and PFMB.

Proposition 1: Financial socialisation influences PFMB.

Proposition 2: Attitude towards money influences PFMB.

Proposition 3: Attitude towards money mediates the relationship between financial socialisation and PFMB.

Proposition 4: Financial literacy moderates the attitude towards money-PFMB relationship.

21.4 Implications and Conclusion

The number of groups and programmes that aim to teach young people about money management has increased dramatically in recent years. The importance of children’s financial habits to their future success is acknowledged by governmental bodies, businesses, financial educators, and policymakers. Despite the prevalence of financial education programmes, which are designed to increase young people’s financial literacy in the hopes that it will lead to better financial decisions, research shows that this is not necessarily the case (Jones 2006; Borden et al. 2008). Because there is little correlation between financial knowledge and financial behaviour, we opted to conceptualise some of the underlying assumptions supporting current policy efforts to encourage responsible financial behaviour. We looked into the possibility that factors other than financial literacy could have a major impact on people’s decisions

regarding their finances. We looked into the interplay between financial socialisation, attitude towards money, and financial literacy on the development of responsible financial habits. The results could be useful for policymakers, financial educators, businesses, and government agencies as they work to teach young people how to make sound financial decisions. To effectively translate knowledge into prudent financial action, young people require opportunities for social interaction and psychological development. Our research suggests that youth financial education programmes would benefit from including parents, who play a pivotal role as socialisation agents for young people. One possibility is including a section for parents in an online financial literacy course designed for teens.

Programs like these could pave the way for improved parent–child dialogue. Parents now have more information at their disposal to enable them to provide their children with formal financial counselling and to model responsible financial habits. Given the scarcity of resources, it is imperative that all financial education programmes are developed and implemented with best practises in mind, with a particular emphasis on the most vulnerable members of society. It is highly unlikely that initiatives with broad applicability will be able to meet the financial requirements of many different populations.

The review of the literature has revealed significant knowledge gaps, despite the fact that there have been significant advances in PFMB research recently. These voids contribute to the further development of PFMB research. However, our research demonstrates that despite this, people still exhibit a wide range of biases in their everyday actions that are not anticipated by the status quo. This interplay of character traits requires personal finance theories. Additionally, the majority of research on financial decision-making has concentrated on how people view their own attitudes, social norms, governing perceptions, and experiential perceptions. Some research suggests that the benefits of financial education for actual financial behaviour may be less than initially thought. Financial literacy, however, is correlated with responsible money management. Financial educators are very interested in the ways in which their lessons can influence students' actions. Although the roles that financial educators are expected to play have been defined, it remains unclear how theoretical frameworks can support educators in fulfilling these roles. Current research provides a solid foundation upon which to investigate the theoretical shards of financial literacy, behavioural economics, and happiness.

The moderating effects of financial literacy on the connection between financial attitude and behaviour have produced mixed findings. There is a significant correlation between financial literacy levels and subsequent outcomes (Eagly and Chaiken 1993). Even when people are financially literate, the link between their beliefs and actions is not always strong (Barbić et al. 2019). Those kinds of results compel scientists to dig deeper.

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Chapter 22

A Narrative Approach in Understanding the Agrarian Crisis: A Case of Indian State of Kerala



U. Sreenath and Madhura Bedarkar

22.1 Introduction

This study is an attempt in understanding the complexities of an agrarian family which is facing a neoliberal economic system. A low-income family which depends on farming and other self-employed jobs to maintain a decent standard of living is the plot of the study. In the last two decades, there has been shrinking of government expenditure in health, education and also in agriculture. This had implications on the cost of living for low-income households. This paper tries to understand the nuances of the struggles facing such a family. There are various instances of families in debt to finance the education for their children. The protagonist of our study has also taken a personal loan from a government-owned financial institution to finance his daughter's nursing education. It has been accepted even from the early times a connection between agrarian distress and indebtedness (Jeromi 2007; Singh et al. 2008; Narayanamoorthy 2006; Deshpande and Prabhu 2005; Ahuja 1976). In 1875, a Committee on Riots was appointed by then British Government in India to study the reason for agrarian riots in Bombay state and one of its earliest recommendations were pertaining to agricultural credit and indebtedness. On the basis of this, the Deccan Agriculturalists Relief Act was passed in 1979 (Dantwala 1952).

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22.2 Review of Literature

There are several studies on agrarian crisis and distress in India. These studies point to various factors such as instability in crop yields, fluctuations in prices, unremunerative prices, small landholdings, indebtedness, recurring droughts, liberalized policies and lack of government investment in agriculture (Narang 2022; Talule 2022; Sidhu et al. 2011; Jeromi 2007; Patnaik 2007; Mohanakumar and Sharma 2006; Mishra 2006). The interrelated risk factors for farmer suicides were identified as indebtedness, fall in social position, social commitments such as conduct of marriages in family, addictions, disputes in family and with neighbours, health problems and history of suicides in family. There are common features in all the farmer suicide cases in this region such as high outstanding debt, lower ownership of assets (bullocks and gold), larger family size (especially female members) and low value of produce (Sreenath and Bedarkar 2022). There has been a decline in agriculture's share in capital formation of GDP from 2.2% in late 90s to 1.7% in 2004–05. The problem of agrarian distress receives policy makers' attention when it gets manifested in the form of farmer suicides. The government normally approaches it with a special package (or scheme), concessions or sometimes even denials.

Kerala's agricultural sector is characterized by certain unique features such as perennial tree and garden crops, intercropping, high wage rates, small landholdings and extensive cash or export-oriented crops (Jeromi 2007; Kurien 1995; Kannan and Pushpangadan 1988). Historically, Kerala's agricultural sector is dominated by export crops such as tea, coffee, cashew and spices. Jeromi (2007) in his study tells us how a traditional export-oriented agrarian sector in a small economy can be adversely affected due to liberalization programmes without any protective nets. The reasons for farm distress in Kerala were identified as stagnant agricultural income, rigid cropping pattern, declining productivity, fall in profitability, unremunerative and volatile commodity prices. George and Krishnaprasad in their study on farmer suicides in Wayanad district of Kerala finds that shifting of farming from food to cash crops increased the capitalist connection in agrarian sector. Along with this increased competition led the farmers to depend on fertilizers and other costly inputs leading to increasing cost of production and even indebtedness. Mohanakumar and Sharma (2006) find that there is strong connection between export cash crops and farmer suicides. The study also finds that these cash crops which are export-oriented have seen increased volatility in prices as well.

Padhi (2012) describes stories as 'entry points' for documenting lives and help us understand better the impact of poverty on an individual. She deals with impact on women, especially widows of the victims of farmer suicides through various real-life stories. In this wonderful study, she uses structured questionnaires and personal interviews with women in the farmer suicide households to understand the agrarian crisis which she terms as 'subjective reality of dispossession'. Gulati (1979) in her landmark study on women labour force in the unorganized sector using a profiling of a brick worker named Jayamma. Going through the life of Jayamma, Gulati looks into gender-based roles in manual labour and how they are underpaid. In spite of

such exploitation, many women hang on to the brick industry due to continuity in employment and lack of jobs in other sectors. Gulati and Gulati (1997) revisit the same brick kiln worker almost after 20 years finds that her condition has worsened. When the research text is narrative, the storyteller is the researcher, the respondents become characters and the plot helps in understanding the larger picture (Holley and Colyar 2009). The study brings to forefront issues such as fragmentation of land holdings, decision making process with respect to certain profession and their alternative ones, etc.

Rajamma (1993) studies the change in a traditional local economy due to a shift from subsistence to cash crops. She studies this through Sakamma, a 40-year-old lady from the Lambani tribe staying in Dadagundananhalli village in Tumkur district of Karnataka. During the 70s, the main crops were all food crops like *bajra*, *ragi*, *jowar* and pulses such as green gram and pigeon pea. But, now there is a shift towards cash crops such as groundnut, cotton and mulberry. The researcher establishes the story, characters and the environment. With the shift in cropping pattern, the protagonist has to depend on food grains from market which she feels is not tasty due to high yielding seeds and pesticides. Now she has to cook what is available in the market. Her money income has increased, but the real income has not. This is because cash cultivation requires huge expenditure on inputs such as seeds, pesticides and fertilizers. For this she has to depend on high interest rate credit from informal sources. An important observation in the study was that when wages were made in kind, there was gender parity. In cash crop cultivation, wages are paid in cash, and a widening gap is there between males and females. Also, she has to spent lot of time collecting firewood and fodder which was available earlier from the food crop residues. The paper concludes with an important observation that measuring success in terms of cash income ignore the role played by non-monetary resource flow in a traditional economy. One see that the later studies on farmer suicides from various parts of India attests the various observations in Rajamma's study. This significance of this study singlehandedly tells us the importance of narrative approach in understanding complex social phenomenon.

22.3 Research Methodology

There are very few studies which employ story telling as a research tool to understand the minute details of the subject under study. It brings to forefront angles which have been unexplored in before. Let us first try to understand what a story is? Roughly, a story should have a protagonist (In this study, it is 53-year-old small farmer named Joseph) along with other characters who are connected to the former. Then, it should have a beginning, a plot and finally an ending.

The study uses a narrative approach to research or what many social scientists mention as 'narrative turn' in social research (Goodson and Gill 2011; Czarniawska 2004; Polkinghorne 1988). This method is increasingly used by anthropologists, sociologists and other social science researchers (Atkinson 1997; Holley and Colyar

2009). It is also used in autobiographies and even in case studies (Bell 2002). Narratives represent knowledge which follows lowermost first approach. Canagarajah (1996) views that narratives incorporate implicit forms of logic and reasoning when compared to the positivist scholarly discourses which are elitist and abstract in nature. Hence, narratives consist of concrete knowledge which are open for new interpretations and thus remain open-ended for creative theorization. The use of narratives in research offers the socially excluded groups such as blacks and women to be part of knowledge construction in the society which is predominantly elitist (Canagarajah 1996). It aids the researcher to depict experience holistically with its complexity and openness (Bell 2002). The researcher gets access to those facts which the protagonist themselves doesn't know intentionally.

Though, Atkinson critiques narratives as privileges access of researcher to personal experiences. Also, various ethical questions arise in this method such as participants not being aware or able to gauge the risks associated with such studies (Muchmore 2002; Hatch and Wisniewski 1995). Gill views that such studies can be an obstruction in the life of the subject or protagonist. This method might be unsuitable when one needs to study lots of individuals. Also, the investigator needs a very close association with the protagonist. This is very vital for studies in social sciences because then only the investigator can enter the personal space of the respondent. This would give the researcher a correct picture of the complex societal, historical and economic factors at play. Such a scene might be hampered by social, professional, culture and language barriers.

This study uses the framework of narrative approach given by Holley and Colyar (2009). The flow of this method starts from narrative constructs. The researcher needs to recognize the relevant characters, define plot and decide the events of significance. The next step is to establish the story by determining the range of characters in the story. This is indeed a challenging task, especially when doing a social science research as lots of characters are interrelated in the plot. The narrative is also shaped by the social-physical environment of the main protagonist. Once the story and characters are established, the researcher needs to define the focalization. This means the researchers has to decide through which protagonist or event, the story needs to be told. Focalization involves frequent shifting between the protagonist's and researcher's point of view. Then, the researcher goes on to organize the data for revealing a definite plot which tells a story. The plot starts with an unanswered issue for which an answer is arrived at a solution. The plot should reflect the message the investigator plans to express to the reader.

One major concern regarding the use of life histories to generalize is associated with the question of validation, that is, studying individual life histories be generalized for similar social groups or not. Thomas and Znaniecki (1918) views that drawing generalizations from mass phenomena to individuals or vice versa both have the same problem of applicability. Further, they conclude that the use of mass phenomena which doesn't have implications on the life histories of individuals are also defective research methods. The most important point here is how the researcher places an individual in their respective social context and understands the forces which shape

their experience (Hatch and Wisniewski 1995). Bell (2002) states that incomparability between traditional research methods and narrative approach would make it difficult to be incorporated by the researchers. As Saldana rightly summarizes that this approach should not be used for its freshness but for its relevance as a medium for expressing the protagonist's story intensely, realistically and convincingly.

22.4 Results and Discussion

22.4.1 *The Family—Establishing the Story and Characters*

Joseph is a 53-year-old small farmer from Kumily in Idukki district of Kerala. He stays with his wife, Marykutty aged 45 years and one son aged 17 years, George. Their daughter Rani, aged 21 years, is doing her B.Sc. Nursing course from one of the numerous self-financing institute located in Bengaluru. She secured her admission into this private nursing college through an agent or better known as 'educational consultant' based in nearby town of Kanjirapally. His son George, aged 17 years, is in his final year at school.

They stay in their 800 ft² house which was built by Rani's father almost 25 years back. It is a decently built house with two bedrooms, a kitchen and a hall. The bathroom and toilet are built outside the home but can be easily accessed from the home. The plot owned by Joseph is spread over three acres, and he cultivates black pepper, tapioca and rubber. He also owns a Bajaj auto-rickshaw which he himself drives. Normally, he waits in the morning and evening at the junction which is about 5 km from their home, and he is also available on mobile for anybody wanting to hire his auto. Marykutty is a homemaker who also contributes her share in cultivation of crops in their homestead farm. In fact, her entire day is almost equally divided between household chores and cultivation.

Joseph's family is not that well off as they own no other property, and he himself doesn't have a stable income generating job. Hence, he always felt that education is the key to get their family out of poverty and uncertainty. Joseph himself is a 10th class dropout and his wife a 12th dropout. Luckily, Joseph didn't have to spend much on his children's schooling as both did their studies in government school which was located nearby. But, Rani wanted to quickly join a job so that her family would get an extra hand for income generation. As the norm in those regions and also the noble cause associated with the job, like the many young girls there Rani also wanted to become a nurse. To become a doctor was meant for the rich and extremely bright students, nursing is a reality for most of the young girls. Even among them, the brightest would get the nursing seats in government medical colleges while the not so fortunate ones would have to contend with self-financing seats in private nursing colleges. Also, there is a notion that doing nursing from colleges located in metros would make it easier for them to access the bigger job market in those cities. All this led Rani to take admission in Bengaluru which is a about 600-km away or an

overnight journey. For her studies, Joseph has taken a personal loan of Rs. 5 lakhs from the Kerala State Financial Enterprises (KSFE) which is state government-owned financial firm. He is estimating that the total cost of her entire course would be nearly Rs. 13–15 lakhs and the rest he would finance by selling a part of his landholding.

George who is in his final year at school wants to enrol in the nearby Government Industrial Training Institute (ITI) for a course in refrigeration or electrical. George has come to know through his friends that there is huge demand for such workers in the Middle-Eastern nations, popularly known as Gulf. Doing such a skill-based course can land him with a well-paying job in any of the Gulf countries. The only major issue is that he needs to get a decent percentage in his Class XII examinations and should be able to secure a seat in the government ITI. A private ITI would mean more expenditure for Joseph and would put additional debt burden on him.

22.4.2 Standard of Living and Income Generating Activities—Narrative Constructs and Focalization

Joseph's main economic activity is farming which is followed by his auto-rickshaw. The rise in price of diesel and overall rise in ownership of vehicles in the region have all reduced the dependence on auto-rickshaw by the local people. But, nevertheless he earns about Rs. 200 to Rs. 500 in a day. The ranges of his earning are Rs. 600 to nothing. He earns his highest when he gets a run to the nearby Mundakayam or Kanjirapally with patients or senior citizens. The impact of COVID-19 was directly felt by the auto-rickshaw drivers as people stopped travelling completely and travel to hospitals were mostly taken over by ambulance due to the fast spreading nature of this disease. As Joseph had financed his auto-rickshaw purchase from the share he received from the sale of his ancestral property in Kanjirapally about five years back, he felt that disposing off the auto would lead to a large sunk cost for him at least notionally. There are three auto-rickshaws in the junction when he waits for his passengers. So the three have divided the entire time slots into three and take turns to man the junction.

But, when it comes to spending the most important cost for Joseph is on the education of his children. Luckily for him, neither of the family members have any disease nor there is any senior citizen who requires a recurring healthcare cost. But, many such low-income households are not lucky as Joseph. The government hospitals are cheap and also provide quality health care facilities, but it requires time as there are long queue. This in turn for self-employed workers like Joseph would entail loss of earnings, thereby affecting their standard of living. Now, when it comes to accessing the private hospitals it would mean increase in cost. Hence, many a times the families chose loss of earnings and prefer to access the government hospitals. To understand why people arrive at this decision is very simple. To assume that you would get a long distance run has a very low probability and the cost difference between government and private hospital is direct.

Table 22.1 Monthly income and expenditure heads of Joseph's household

	Income	Expenditure
Auto-rickshaw	Rs. 4000 to Rs. 5000/-	–
Diesel and maintenance	–	Rs. 1000–1500/-
Farm income	Rs. 10,000 to Rs. 15,000/-	–
Education expenditure (on George)	–	Rs. 300–500/-
KSFE loan expenditure	–	Rs. 7700 (repayment)
Total	Rs. 14–20,000/- approx	Rs. 8000–9000/- approx

Source Primary data from the study

Joseph gets access to cheap dry rations like rice, sugar and pulses using the ration card issued by the District Rationing Office under the Government of Kerala. Most of the vegetables for their self-consumption is grown in their plot along with few hens. When it comes to expenditure on food items, Joseph's main expenses are on fish, vegetables and groceries which he gets from the nearby Kumily town. One can see the working of Giffen's paradox, which is even with an increase in price of fish, there would be increased demand for the same. This demand is maintained from cutting down consumption of relatively cheaper vegetables (Table 22.1).

22.4.3 Impact of the Neoliberal Economic Environment—Discussion

The free market economy has created lot of uncertainty in the commodity market. The black pepper and rubber both of which contribute the lion share of farming income for Joseph are cash crops whose demand sees lot of variation. These export-oriented cash crops, especially black pepper show extensive fluctuations in prices (Mohanakumar and Sharma 2006). The large number of Free Trade Agreements (FTAs) entered with tropical countries like Sri Lanka, Thailand and most recently the unsuccessful FTA with Association of South East Asian Nations (ASEAN) have all opened up our domestic market to the influx of agricultural commodities from these countries. Rajasenana also talks about the sharp decrease in prices of pepper which has contributed to agrarian distress among the cash crop growers. The large volatility in pepper prices have led to farmer suicides in Wayanad district of Kerala which has similar conditions like Idukki.

In fact, small growers like Joseph keep dry stock of black pepper with them for 5–8 years. This acts like a fixed deposit for them, and they offload this into market when they need liquidity during marriages or for education. Joseph had approximately 120 kg of black pepper in his home which he had stored very carefully. When this study was conducted, the price of pepper was very low at Rs. 350/- per kilogram, and Joseph felt that the present time is not suitable for selling the stock. In fact, Joseph was thinking of alternatively farming cardamom which was at Rs. 800 per kilogram. The reasons he gave for this thought was that cardamom has a very low gestation period of 18 months when compared to black pepper which had minimum of 5 years. But, the catch was that cardamom plants are susceptible to diseases and also climate changes. Under such circumstance, black pepper is a more stable crop.

Most of the economists have an affinity to understand poverty as material deprivation, but the reality is that there is also deprivation with respect to aspirations, education and social relations (Patnaik 2007). Rani was never able to visualize studying for medicine; instead she felt that nursing is a more towards reality for her. No doubt, the nurses are one of the lowest paid skilled workforces not only in medical field but also in the whole of labour market. A lot of expenditure goes into acquiring the required skills and degree, while the job is underpaid. The luckiest among them get placed into the hospitals of developed countries or get into government jobs. But, most of them are not so fortunate to find well paid nursing jobs. Many of them agree to work in dangerous regions to repay the mounting debt taken by their parents to finance the studies or for paying the recruitment agencies for securing jobs in foreign countries. The news of 46 Kerala nurses been taken hostage by the ISIS in 2016 and the recent killing of a nurse in Israel due to rocket attack all are fresh in the mind of the readers. One of the nurse who was taken hostage mentions that she paid Rs. 1.6 lakh to a recruitment agency in New Delhi for getting this nursing job in Iraq (<https://www.ndtv.com/blog/i-was-an-isis-hostage-a-kerala-nurses-iraq-diary-593731>). Now, Joseph would need to find alternative funding, in case Rani takes the help of such manpower or recruitment agency.

Such mounting debts lead to loss of land which is the main asset for such small growers, finally culminating in farmer suicides. There have been many studies on this trend across various crops and regions of India (Gruère and Sengupta 2011; Sidhu et al. 2011; Padhi 2009; Mishra 2006; Mohanty 2005; Sarma 2004). Patnaik (2007) mentions that neoliberalism necessitates reduction in public expenditure at macroeconomic level and agricultural sector is an easy prey for this cutback. Banerjee (2009) finds evidence of rising indebtedness and depressed income in the rural parts of Andhra Pradesh and West Bengal. In fact, his study based on farm-level data finds that all strata of both food and cash crop cultivators have seen income fall. Even the larger peasantry class which grows cash crops though is able to retain a considerable surplus which is just enough to cover their consumption expenditure.

The neoliberal school of thought has always adhered to the concept of free market and any deviations from it like centralized state-led planning were considered wrong. Any reading of Institutional and New Institutional Economics would make us aware about issues such as failure of market, formation of firms, monopolies, etc. Also, there is also an element of ‘self-exploitation’ given by the famous Russian economist A. V.

Chayanov. It is the concept of peasants damaging themselves through hard labour for a very low return (Millar 1970). This is especially with true with the unpaid labour rendered by the female in the household.

22.4.4 Way Forward—Use of Technology

Though over the last seven decades, the government has taken lots of steps to use digital technology to help the farmers in India. The high level of illiteracy, lack of internet penetration among farmers, high cost of technology usage and lack of awareness could be the probable reason for low usage of such digital technology by farmers. The ‘E-agriculture Strategy Guide’ brought by the Food and Agriculture Organization (FAO), United Nations Organization (UNO) discusses about the role played by ICT which is summarized in Fig. 22.1.

The challenge before the government is manifold and in case of the protagonist of our study is to ensure better income, reduce the cost of cultivation and increased production as well as productivity. Considering the case of climate and crop, there is very high crop rigidity in the hills of Kerala. Hence, a shifting to other crops is not a short-term solution. Here comes the relevance of technology in risk mitigation

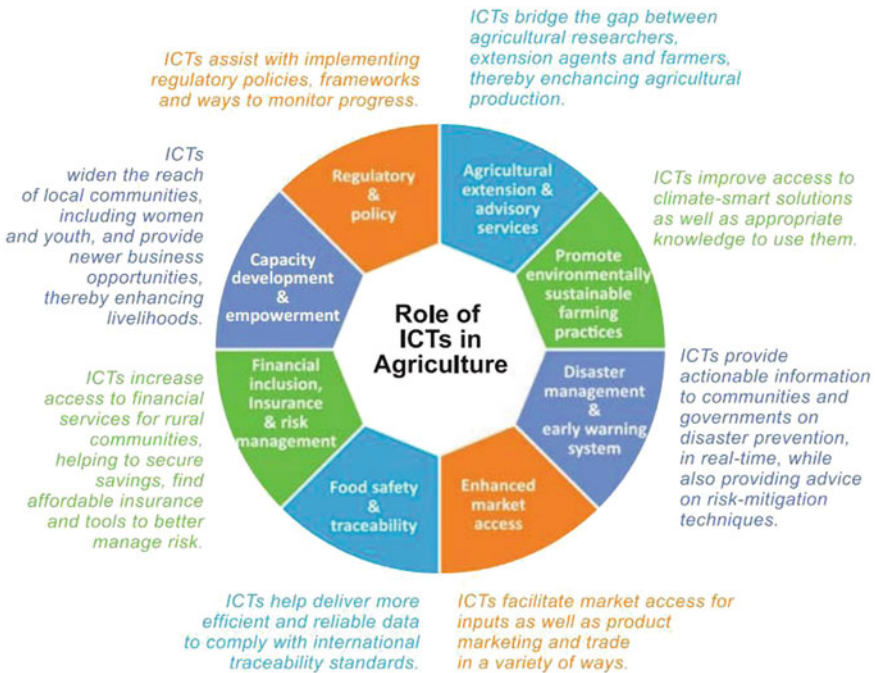


Fig. 22.1 Role of ICT in agriculture. Source E-Agriculture Strategy Guide, FAO (2017)

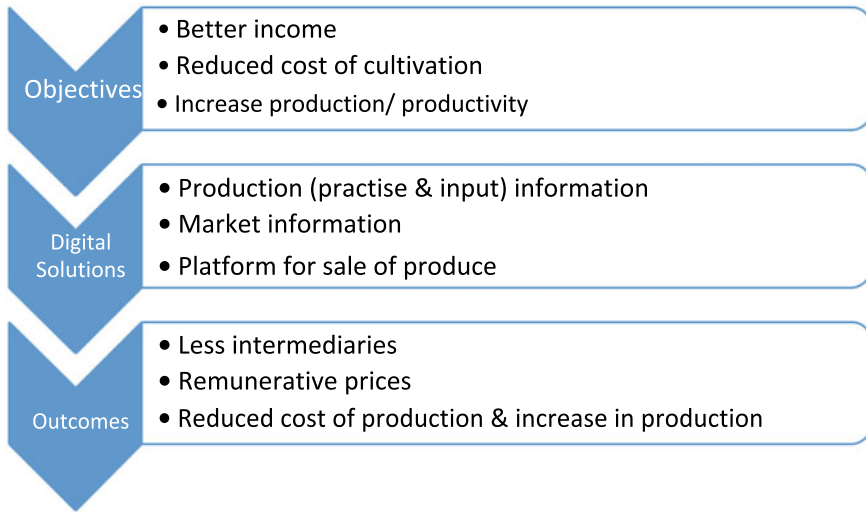


Fig. 22.2 Digital technology objectives in farming and its impact

in agriculture as an economic activity. Smartphone is a common device in a rural household in Kerala. Though every individual might not have one in a family, there is at least one device in every household. There is no doubt that smartphone is the cheapest way to reach a farmer in Kerala, and there is an urgent need to decentralize the digital technology approach so that it transcends social, cultural and linguistic barriers. An app-based technology which is administered by the government in a decentralized manner would go long way in helping rural farmers tide the agrarian crisis. Why government? It is because this is the main agency which provides institutional support to the farmers. Till now most of such digital technology have been centralized such as AGRINET or DD Kisan channel which doesn't take into account the local conditions and is largely standard. The advantages of such a technology is summarized in Fig. 22.2.

22.5 Conclusion

In fact, Joseph is completely clueless about how to raise additional financial resources for Rani's education. The course, B.Sc. (nursing), which is Rani is pursuing is a four-year course, and she is just in her third year. The next year, Joseph needs to complete the full payment of fees and also look for new avenues to raise the money for the recruitment agency. The cost on education is bound to increase as George would also continue his education. When it comes to looking into agricultural production, Joseph faces the dual issues of high input cost and volatile output price. The agrarian sector is hopeless as far as Joseph is concerned. Like the rest of growers in that region, Joseph

wants his son to have a stable job like a government job. He doesn't want George to depend on farming for his livelihood. The government would face a herculean task of retaining farmers in farming profession. With practically no investment both from the state and the private sector, crisis is looming in a big way. To rub salt in the wound, climate variations are playing havoc in this sector. Excessive rainfall, landslides, etc., have not only made farming difficult but even life in Idukki difficult.

There is an urgent need to put life into credit cooperatives and other sources of financing personal needs of these growers. The debt relief schemes, mostly consider only farm loans and the growers in these regions require loans not for this. But, if we look deeper they need credit because of excessive increase in production and living cost coupled with depressed and uncertain farm income. During late 90s till 2006, Wayanad district had seen farmer suicides as a manifestation of agrarian crisis in the region. More than 350 farmers were victim to this crisis which led to the then government in constituting the Kerala State Farmer' Debt Relief Commission. It was a seven-member commission which consisted of economists, politicians, farmers and legal experts which went around villages to directly meet the farmers. Each case was studied thoroughly and relief from the debt was given to the farmers. The drastic reduction in the farmer suicide cases in the district to three in 2015 stands testimony to the success of this commission. Hence, there is an urgent need on the government to address this crisis in the farm sector which could spiral into similar crisis. Joseph has found a way to raise money without debt and that is to sell his land. But, he would be facing issues such as finding a seller willing to give suitable price and dispossession of the only asset he owns.

To conclude as Bell (2002) rightly points out whether or not the people understand or believe the stories they tell are actually irrelevant because the study explores the facts which shape the stories. The study of narratives is the study of how humans understand the world. The story of Joseph and Marykutty helps us in understanding the complex socio-economic factor which are at play in the neoliberal economic system. During the British period, a commission was set up under the chairmanship of Sir Chhotu Ram which travelled the length and breadth of Punjab interacting with farmers in debt and accepting memorandums from them. On the basis of their narratives and documents, the commission granted them debt relief. This can be classic case of narratives being part of the policy making process. Theory is limited to certain area and is always local. The moment it is applied to another domain, it begins to come across difficulties and blockages. This requires the theory to be redirected (Deleuze and Foucault 1977). Hence, narrative approach has always a better scope in social science research. Also, the key is low cost, cheap, easily accessible and local technology can go a long way in mitigating the crisis affecting the agrarian sector in our country.

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Chapter 23

Adoption of Fintech Towards Asset and Wealth Management: Understanding the Recent Scenario in India



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23.1 Introduction

The “Fintech,” stands for “financial technology,” has gained prominence today, which refers to a wide range of new technologies that are being utilised to get better and computerise the delivery of financial services. Financial technology started with small start-ups, supporting banks with their innovative methods, and later developed into the latter forging partnerships with banks to strengthen the whole financial services ecosystem. Fintech in wealth management has created a paradigm change in the investing sector. The practice of managing an investor’s assets in line with a specific strategy and financial plan, as well as the implementation of that strategy with varying levels of client interaction, is known as wealth management. Tax preparation, investment management, tax planning, offshore services, retirement planning, and other crucial wealth management services are just a few. At the intersection of both money and technology, the term “wealthtech” was developed. Any digital solution designed to simplify wealth management procedures is referred to as “digital wealth management solutions.” The fintech sector, which also encompasses digital payments, regulatory technology, insurance technology, etc., includes wealthtech. In the era of fintech robo-advisory services are becoming more and more popular among regular investors who want automated advice. Fintech helps the investors in asset allocation, portfolio optimization, trade execution, rebalancing, and tax solutions. Today some of the major wealthtech players in are INDWealth, Zerodha, Upstox, Groww, Kuvera, Scripbox, ETMoney, WealthDesk, Cube Wealth, Sqrll, etc.

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Today the investors need a system that can not only advise them on where to put their money, but also automate trading and rebalance their portfolios so they don't have to keep track of stock price changes all the time. Such investors are now looking more and more at quantitative investing, which makes investment decisions using quantitative analysis. It is founded on thorough statistical analysis and frequently entails creating intricate models and algorithms that evaluate markets, asset prices, volatility, and other investing characteristics. High-frequency trading, algorithmic trading, and statistical arbitrage are a few types of quantitative investing.

The primary objective of this study is to review and access the various services offered by fintech and wealthtech firms in India, contemporary developments in wealth management and a networked ecosystem of financial cultures in the digital Indian age of financial investment, and wealth management industry.

23.2 Review of Literature

Growing expectations of the customers demand for digital banking solutions, fuelled by technological innovations in many other industries (retail, hospitality, travel, etc.), have led to an increase in interest in fintech (Marous 2022). In last few decades, financial institutions, banking practices, and financial services have radically changed and improved (North 2018), as a result of technological advances, which has impacted how financial institutions function and how financial activities are carried out. Hence, the traditional method that banks advise their private banking and wealth management clients is under pressure from technological advancements and shifting customer preferences (Chung-Chi and Jyh-Shen 2012; Date et al. 2013; McKinsey & Co. 2016). The financial services and banking industry of India has transformed as a result of the emergence of fintech, which includes loan services, payment services, wealth management, remittance services, insurance services, etc. Blockchain technology, digital banks, mobile banking, artificial intelligence, and biometrics are some of the current trends in financial technology (North 2018). The Fintech industry will undoubtedly discover several profitable prospects in the "Digital India" age. The rising number of start-ups is one of the primary factors in India's Fintech industry that will determine its future. India is currently one of the leading nations for Fintech innovation. The advancement of the digital economy is being fuelled by financial technology that is enhancing the lives of Indian citizens. With the evolution of Fintech, the asset and wealth management industry have revolutionised. Fintech companies have the greatest influence on the wealth management industry, where 27.4% of consumers use them in addition to a traditional provider and 17.4% of consumers use them exclusively. Given the abundance of fintech options, the study also discovered that 46.2% of consumers use products from more than three Fintech companies. This fragmentation of financial solution providers may endanger customer loyalty to traditional banks or present a chance to combine various solutions under one roof (Marous 2022).

The asset and wealth management (AWM) industry is now experiencing exponential growth. Asset and wealth managers must become business revolutionaries, even disruptors. As of 2021, India's \$31 billion Fintech industry ranked third globally, behind that of the USA and China. India, however, continues to be an untapped market because of a lower financial services penetration rate (Chavan 2022). According to a PWC report, the global AuM increased from US\$84.9 trillion in 2016 to US\$111.2 trillion by 2020 and is projected to reach US\$145.4 trillion by 2025. Retail (mutual) funds' assets, including those of ETFs, are expected to nearly double by 2025, and institutional mandates will also increase in size (PWC research report 2022). A fully automated wealth management platform has been made possible by the introduction of digital payments, e-KYC via Aadhaar, online fund transfers, and automated investment summaries (Kumar 2017).

The growth of wealthtech's technology is disrupting the wealth management industry with a lot of technology changes currently occurring in the asset management business as they are in the majority of the financial industry, particularly the retail sector. Wealth technology is attracting a lot of interest from high-net-worth individuals (HNWIs) and ultra-high-net-worth individuals (UHNWIs), including older generations. Wealthtech includes business-to-consumer (B2C) techniques like crowdsourcing, alternative finance, and robo-advisory. It also includes business-to-business (B2B) corporate innovation and technology in the areas of blockchain, artificial intelligence, and big data analytics that help asset managers give their clients higher returns at reduced costs. Wealth management is changing significantly in two key areas: customer experience and digital transformation. In these trying times, success depends on having a solid understanding of customer expectations and demographics. The median age of high-net-worth individuals (HNWIs) is on the decline as millennials demand an omnichannel experience, hyper-personalization, and specialised portfolios like sustainable investment. Companies are able to comprehend the shifting values of their clients and develop solutions in line with thorough consumer insights. By improving customer satisfaction, businesses can gain a competitive edge. Businesses that emphasise delivering a positive customer experience are adopting creative methods like gauging client sentiment to develop hyper-personalised services. Businesses are also using machine learning (ML) and artificial intelligence (AI) techniques to improve the client–advisor interaction.

23.3 Research Methodology

The aim of the study the various services offered by fintech and wealthtech firms in India, contemporary developments in wealth management and a networked ecosystem of financial cultures in the digital Indian age of financial investment, and wealth management industry. The study is based on a systematic review of existing literature on Fintech and wealthtech.

23.4 Interpretations and Discussions

Wealthtech aims to offer digital solutions to improve personal and professional ways of managing and investing. It uses modern technologies like artificial intelligence and Big Data to offer other methods of wealth management other than the ones conventionally used. Moreover, the wealthtech sector in India has over 300 startups focusing on robot-advisory, personal finance management, online brokerages, investment platforms, among other use-cases. The Fintech market in India is growing at an unprecedented rate, making India one of the fastest-growing fintech markets, ahead of the USA. Some of the services offered by wealthtech companies in India are as below.

1. A variety of digital investing tools for goal setting, portfolio management, and investment planning.
2. Social trading platforms are online forums for traders where they may exchange their experiences and ideas.
3. Users can trade in real time on digital trading platforms regardless of their background or credentials.
4. Compliance tools are applications that automate or simplify procedures related to ensuring compliance with regulatory requirements.
5. Algorithmic trading is a quick method of carrying out orders or trades in accordance with a predetermined set of guidelines.
6. Some wealthtech and insurance tech companies are now providing financial institutions with realistic asset-liability management approaches based on scenarios that incorporate sustainable investing outside of the bounds of the law.

23.4.1 *Fintech in Wealth Management Industry*

The origins of the industry now known as “Fintech,” which encompasses a wide range of financial services delivered via online and mobile-based technology solutions, may be traced back to the early 1990s (Arner et al. 2016). Fintech services come in many forms, and they’re improving the financial services industry and the lives of people everywhere by digitising banking, investing, saving, borrowing, and giving financial advice (Chinnasamy et al. 2021; Gomber et al. 2017). PayTech (payment technologies) provides digital payment services; LendTech (lending technologies) provides streamlined, accurate digital lending solutions; crowdfunding/equity financing allows businesses to raise capital through the sale of securities online or through the promise of incentives to those who contribute to the project’s funding goal; and so on. We have neobanks, which provide digital banking and financial services; regulatory technologies (RegTech), which provide the delivery of regulatory compliance in a secure and cost-effective manner within a standardised, integrated, and transparent ecosystem; insurance technologies (InsurTech), which provide insurance solutions within a digital financial ecosystem; and blockchain

technologies. Investment robots that help people build and trade stock portfolios are one example of the “personal finance” or “robo-advisor” sector of “wealthtech.”

PayTech allows consumers to pay for goods and services using their mobile phones, tablets, and other connected computer and mobile devices (de Luna et al. 2019). Increased mobile device use, together with favourable economic and social circumstances, has contributed to the spread of these services to new areas, particularly those still in the process of economic development (Iman 2018; Kang 2018). Government payments to people are now included in peer-to-peer and mobile payment platforms (Iman 2018). In recent years, LendTech and crowdsourcing have emerged as viable substitutes for more conventional funding mechanisms including banks, venture capital firms, angel investors, and government grants (Gomber et al. 2017). If a borrower has a low credit score or is otherwise unlikely to be approved for a mortgage loan from a typical lender, LendTech may be able to help (Jagtiani et al. 2021). Credit organisations may now profit from the use of technology to evaluate broader data sets and anticipate default risks (Jagtiani and Lemieux 2019). Crowdfunding sites, unlike more conventional fundraising avenues, bring together company owners and investors from all around the world (Mollick 2014). Crowdfunding may take numerous forms (Meyskens and Bird 2015). The most popular kind is equity crowdfunding, which allows even novice investors to participate in the rewards of entrepreneurial endeavours in exchange for a share of the profits (Hornuf and Schwienbacher 2018).

Providing traditional banking services exclusively online, neobanks are becoming more popular among millennials and other customers who have high expectations for their financial services (El-Gohary et al. 2021; Temelkov 2020). They are able to provide banking services to customers for lower fees and provide investors larger returns because of their efficient operations. RegTechs help organisations with regulatory compliance, risk management, and reporting in today’s environment of big data, shifting rules, and consumer rights concerns (Butler and O’Brien 2019). RegTechs are projected to play a key role in information monitoring and the prevention of financial crimes as a result of the proliferation of Fintech services (Dubey et al. 2020). One additional recent innovation in the realm of financial technologies is InsurTech, which streamlines data collecting, facilitates risk management, and provides digital and integrated insurance solutions (Stoekli et al. 2018). After COVID-19, it is anticipated that InsurTechs would further displace conventional insurance carriers due to the large investments made in the InsurTech sector. Increased digitisation of financial markets and technological advancements facilitating functions like automated trading, micro-investments at low commission, automated asset management, and retail investments have contributed to the rapid expansion of personal financial management services and wealthtech in recent years (Dziawgo 2021). Advantages in wealth management formerly reserved for the wealthy and the middle class may now be made available to everyone because to innovations in financial technology, or “wealthtech” (Arslanian 2018) (Fig. 23.1).

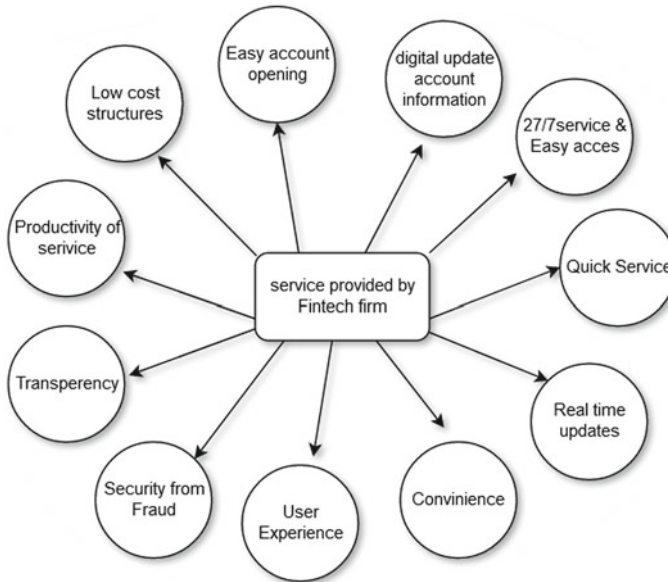


Fig. 23.1 Service provided by Fintech firms

23.4.2 Benefit of Fintech and Wealthtech

1. Low-cost structures
2. Prompt account opening
3. The capability to digitally update account information
4. Access to compiled account/relationship data at any time and from any location
5. Real-time updates on the schedule for problem resolution
6. Fraud and security protection
7. Productivity of services
8. Better value for your money
9. Quick and effective services
10. Transparency
11. Convenience
12. User encounter.

23.4.3 Recent Trends in Wealth Management Industry in India

The client's identity serves as the blueprint for the wealth manager's approach, making wealth management a very individualistic field. Managers now are meeting

with people in their 30s and 40s, while a few decades ago the customer and decision factor behind wealth management portfolios would have been a male family member, often a patriarch in the 60- to 70-year-old age range. Furthermore, wealth management is no longer the domain of males alone; today's customers are just as likely to be women as men, and both sexes have equal say in financial matters (Taparia 2022). The typical age of those making financial decisions has shifted in recent years, which has caused significant shifts in the wealth management industry. There has been a generational change among wealth managers, with younger workers bringing a breath of fresh air and new ideas to the industry. After the rise of millennials, the wealth management industry has seen a surge in the number of women seeking their services. Now that they have the same access to capital as men, women are taking control of their own finances and making choices that reflect their unique identities and needs.

Increased artificial intelligence (AI) implementation is one of the current market trends. The wealth management sector is among the first in the financial services industry to make extensive use of AI-based technology. Wealth management firms may benefit from AI's increased efficiency, productivity, and profitability in many different areas, including client acquisition, portfolio management, and compliance. Compliance checks, credit rating research, and even intricate investment analysis and portfolio optimization are just a few examples of the kinds of mundane operations that are rapidly being automated with the help of artificial intelligence. This has the potential to drastically improve customer satisfaction without the high labour expenses involved with staffing a big operation. The whole population is rapidly adapting to the digitalization era. The world is becoming more streamlined and convenient because to digitalization, which is transforming everything from day-to-day activities to company strategy. The financial management sector, which is increasingly reliant on digital tools like robo-advisors to expand its offerings to customers, may benefit from this trend. Robo-advisors are algorithm-based, computer programmes that provide assistance in managing investments. Customers are at the centre of the design process for these services, and their feedback is used to inform the evolution of the underlying technology. This approach, which is growing in popularity among many financial institutions, expands the market's potential since it makes it available to a wider range of consumers. Wealthtech technologies like robo-advisors are gaining traction as HNW customers become more techs aware and want the same openness and accessibility from their financial advisors that they get from their retail banks. Over the next two decades, millennials and Gen Z are expected to receive an inheritance of £1 trillion. With this windfall comes the high expectation that services will be fully digital and operate similarly to Amazon and Google (France-massey 2021). Younger generations are becoming more important customers for wealth management firms, and as a result, they have a need to communicate with advisers on their own terms. They need to be able to text and video chat with financial advisers in real time, as well as through all other channels. They also require continuous access to investment options and portfolio data. To gain the loyalty of this group, conventional investment ecosystems must be redesigned to better meet their needs (Rourke 2019).

To attract and retain millennial and Gen Z customers, you must adopt a digital-first mentality. It is essential to get everyone on board when attempting to alter the company's mindset and culture to promote and reward digital innovation. Everyone in the organisation, from interns to partners, will be more motivated to adopt a digital mentality if they can see its value (Treangen 2022). Invention, originality, and productivity are all boosted when one adopts a "digital-first" frame of mind. Companies with this outlook are always on the lookout for better ways to meet the needs of their customers and advance their field. Every policy choice and long-term objective of the company originates from this mentality. It's the cornerstone of the company's and its advisers' digital strategy, which gives them an edge in the market. When a business adopts a digital-first philosophy, every member of staff seeks for digital solutions to traditional business challenges.

There has been a lot of focus on robust optimization (RO) models recently in the context of Wealth management. RO broadens the scope of conventional wealth optimization models by formally and analytically factoring in uncertainty. Operations researchers have shown a lot of interest in RO as a generic tool for optimization under uncertainty (Ben-Tal et al. 2009; Gabrel et al. 2014; Kouvelis and Yu 1997). However, the RO framework recognises that the inputs are fallible, so they belong to an uncertainty set around their nominal estimates, in contrast to the point estimates used in traditional portfolio optimization approaches for the modelling parameters (i.e. asset returns and covariances), which are typically specified using historical data. The field of RO is connected to others in the area of optimization under uncertainty, such as stochastic programming. Fabozzi et al. and Xidonas et al. studies show that RO models have been frequently employed for portfolio optimization (2020). For example, Goldfarb and Iyengar (2003) used ellipsoidal uncertainty sets to present strong formulations for the mean-variance model, the Sharpe ratio, and value-at-risk (VaR), while Tütüncü and Koenig (2004) considered interval uncertainty sets for the mean returns and covariance matrix of the assets.

23.5 Conclusions

The Indian fintech ecosystem is composed of the sub-segments for payments, loans, wealth technology, insurance technology, and regulation technology. In order to comprehend the most recent trends in the wealth management industry, which is experiencing a generational wealth transfer in favour of millennials and Generation Z and must, therefore, adapt to a new customer base, the study's objective was to critically evaluate the body of literature, including research papers, and to compare and contrast the data that was presented. The rapid digital shift has allowed wealthtech to establish itself as an essential component of wealth management.

Today, investors are looking for more creative and economical solutions in order to provide results that better satisfy their needs and improve earnings. Analytics has helped to shift the power from investment firms to investors. The adoption of automated money management tools will increase among this generation. Automated

asset allocation, a feature of robo-advisers, has already been increasing the use of alternative investments and reducing the demand for human advice. Tech also makes outcome-based planning possible. It can instantly identify essential life goals and solutions which match. Finally, wealth management operations can be automated. Technology will have an impact on every aspect of asset and wealth management, but not without human review. However, for the first truly technology-enabled enterprise to appear, barriers between the business and technology must be erased. People will still typically make the final investment decisions, even though every area of investment research will benefit from the exponential development in computing power, predictive analytics, artificial intelligence, and big data. There won't be any more research teams made up of several analysts anytime soon. As an alternative, artificial intelligence-powered robotic processes will track and analyse all publicly traded companies as well as other financial and non-financial data. Asset managers can also process data from supply chain analysis and other contemporary data sources that are available to them.

Technology will also make risk management easier. In running a risk model in the past was difficult. Algorithms made feasible by cloud computing are now making risk calculation ratios and fictitious situations easier and less expensive. "RegTech" powered by artificial intelligence will reduce compliance expenses by not just automating operations but also by alerting businesses to potential regulatory roadblocks. An asset manager might be informed of the country's beneficial holdings disclosure rules prior to purchasing a stock, for example, in order to keep the holding below the critical holding threshold. Technology-enabled investment makes difficult to differentiate between the asset management, banking, insurance, wealth management, and technology businesses. Multi-asset outcome-based solutions will be constructed with the help of technology and data analytics using inexpensive building pieces like ETFs or index trackers. With a nominal fee, computer algorithms can produce specialised answers. Based on funding in the billions of dollars for new wealthtech companies and a strong reliance on key technologies such as artificial intelligence, robo-advisory, Big data, or blockchain, it may be inferred that wealthtech's role in wealth management will become increasingly significant and could even attract more clients, who are both younger and less wealthy.

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Part VI
Entrepreneurship and Small Business
Management

Chapter 24

SME CEO Characteristics and Their Impact on Alliance Partner Selection—A Systematic Literature Review



Gurveer Singh Jaswal and Neetu Yadav

24.1 Introduction

Small and medium enterprises (SMEs) form alliances to access new resources and most of these alliances are promoted and managed by internal leaders (Barrett et al. 2021). As most SMEs are family-owned businesses, they have for quite some time been interested in understanding the impact their CEOs/leaders have on the organization. Studies also note that this understanding is important to SMEs given their special ownership structure that allows CEOs to exert greater influence in internal decisions compared with larger firms (Chandler et al. 2021). Multinational firms that conduct operations and business in multiple countries have increased as a result of internationalization. Unlike SMEs, these MNCs have internal leaders to help in strategic decisions. Small and medium-sized businesses experience tremendous rivalry as a result of this openness to international trade, and they must become more competitive in order to survive. As referenced by earlier studies on the internationalization cycle, it brings many difficulties for small firms, like their ability to compete with firms outside their culture, symmetry, and geographical distance (Bauweraerts et al. 2019). Small firms in emerging markets have generally shown a hesitation to adapt new approaches. This has resulted in hesitancy to choose and select new partners for future growth. Despite their economic relevance, previous research has also not sufficiently considered the use of alliances in emerging market SMEs but focused on large domestic and global companies. A small firm's asymmetric alliance with advanced multinational companies helps improve the perception of the firm in the

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minds of its consumers. As entrepreneurial networks are needed for the selection of new partners, it is important to understand the processes through which network relations are formed (Kaandorp et al. 2020).

Small and medium-sized businesses (SMEs) account for 40% of exports and 45% (forty-five percent) of the nation's total industrial production in India despite producing only 7.09% of the GDP in manufacturing. This is because SMEs in India are incredibly underproductive because of their small size, infrastructure bottlenecks, absence of formalization, lack of capacity building, and inadequate technology adoption.¹ The total contribution of SMEs account is 37.4% of the GDP (MSME Annual Report 2021–22). 60 million out of India's 63.84 million SMEs are micro-enterprises, 3.3 million are small enterprises and the remaining fewer than a million are medium enterprises. The Indian government has long sought to defend these organizations against powerful and more established rivals on a local and international level (Sen et al. 2022). Despite the government of India's heroic efforts to offer MSMEs different types of support, including direct financial assistance and credits for business preparation, these small businesses continue to face several asset imperatives and exhibit major flaws (Singh and Kumar 2020). In this study, we argue that leaders of small firms have an important role as decision-makers in partner selection. Partner selection arises from the need of Indian small firms to break the shackles of government-controlled artificial competition and embrace competition (KPMG Report 2017). Thus, it is in recognition of the traits of an SME leader as a pivotal decision-maker that we proceeded with this study. Previous studies have revealed that we are largely unaware of the causes and effects of the networking procedures used by small business leaders. Why do some owners of small businesses engage in greater activity than others? Answering these questions can help us better understand networking processes, which can shed light on the causes of significant disparities in how small businesses choose their partners.

This paper aims to make the following contributions. The study begins by doing a systematic evaluation of the available literature and analyzing it using the PRISMA framework to examine the role that small business leaders play in selecting alliance partners. Our research question is "What are the main characteristics of a SME leader and what role they play in alliance partner selection?" We first studied the major research domains in this area are listed in this study. Second, we evaluated previous research data to understand leadership traits of small business owners (entrepreneur/family businesses) in partner selection. Third, we identified the various variables and worked toward development of a theoretical model on the subject. Finally, we provided future directions to help test this model in India.

¹ Anonymous, SME Chamber of India; 1st July 2020; SME Sector in India; <https://www.smechamberofindia.com/about-msme-in-india.php>.

24.2 Theoretical Framework

Traditional theories on alliance formation have focused on tangible benefits such as the ability to reduce costs. The Transaction Cost Economics (Williamson 1979) stated that whether activities would be internalized or externalized would depend on the cost of doing the transaction. It viewed transactions generally as transfers of products or services across interfaces and maintained that internalizing the transaction within a hierarchy was the right course of action when transaction costs were high. The reverse was said to be true if the cost transactions costs were lower. This theory has long been used as the base for any partner selection in strategic alliances (David and Han 2004). With the advent of competition and technology, the desire to innovate has come to the forefront. In order to strengthen or supplement their internal innovation efforts, corporations have become more dependent on external information and collaboration with other firms, as well as on scientific knowledge, which is becoming more and more significant (Whittaker 2009). However, due to their lack of legitimacy, small businesses find it difficult to get into collaborative relationships. The Entrepreneurial Network Theory (14 papers) and the Inter-Firm Collaboration Theory (12 papers) were the most widely used in the research papers found; the same has been adopted for this study (Refer Table 24.1). In small businesses, the entrepreneur plays a considerably more important role than in huge corporations, and the entrepreneurial spirit can flourish more easily because there are fewer hierarchies. The network created by him based on his characteristics plays a key role in the functioning of the firm (Freiling 2007). The network theory of entrepreneurship is crucial for understanding how links between entrepreneurs and information sources foster regional innovation and success (Huggins and Thompson 2015).

24.2.1 *Inter-firm Collaborations*

The growing emergence of new challenges has forced organizations to look beyond the Transaction Cost Economics (TCE) and forming strategic alliances to reinforce resources of all kinds looks to be one potential solution to these problems. “An organizational framework, by which two or more firms functioning in isolation manage to overcome their resource limits,” is the definition of an inter-firm alliance. In fact, an increasing number of companies depend on alliances to get the resources necessary to accomplish their strategic goals (Franco and Haase 2012; Urbano and Yordanova 2008). Broadly speaking, Inter-firm Collaborations are “explicit contacts between two or more firms, so that the autonomy and identity of the parties are, at least in part preserved.” While being different from mergers, acquisitions, and other integration activities, they nevertheless represent a strategy for achieving external expansion that is based on the creation of a new good or process and/or the marketing of it on a new market. The interdependence of enterprises caused by scarcity or lack of resources is a key to the growth of an alliance.

Table 24.1 Summary of various theories used in the research papers

S. No.	Theory	Explanation	Number of papers
1	Upper Echelon Theory	(1) It states that organizational outcomes are partially predicted by managerial background characteristics of the top-level management team. (2) As a reflection of the contributions a manager makes to an administrative situation, the focus is mostly on observable management traits. Age, length of service with the organization, functional history, education, socioeconomic roots, and financial situation are a few examples of these traits	6
2	Entrepreneurial Network Theory	(1) According to Neergaard et al. (2005), networking has become a key issue in entrepreneurship research during the 1990s and is increasingly seen as a crucial component of the entrepreneurial process. (2) Network strategy lays emphasis on the information gathered from direct relationships with clients, value chain participants, and market participants	14
3	Resource-Based View	A managerial paradigm called the resource-based view is used to identify the strategic resources that a company might use to gain a long-term competitive advantage. The RBV concentrates managerial attention on the company's internal assets, capabilities, and competencies in an effort to identify those with the potential to provide superior competitive advantages	8

(continued)

Table 24.1 (continued)

S. No.	Theory	Explanation	Number of papers
4	Socio-Economic Theory	Social economic theories concentrate on how societal patterns are affected by economic matters in terms of advancement or regression. Social economics explores how social norms and beliefs impact consumer behavior and, consequently, how economics and social behavior are interconnected (in this case partner selection)	3
6	Inter-Firm Collaboration Theory	Inter-firm Collaborations are “explicit contacts between two or more firms, so that the autonomy and identity of the parties are, at least in part preserved.” While being different from mergers, acquisitions, and other integration activities, they nevertheless represent a strategy for achieving external expansion that is based on the creation of a new good or process and/or the marketing of it on a new market. The interdependence of enterprises caused by scarcity or lack of resources is a key to the growth of an alliance	12

According to Franco and Haase (2012), inter-firm collaborations are resource-based and resource dependency. Barney says the resource-based view seeks collaborations to create competitive advantage. The goal of resource-based theory is to study a firm’s resource position and consider some strategic alternatives offered by that analysis, such as the relationship between profitability and resources and how to manage the firm’s resource position over time. According to the resource dependency theory, resources are a crucial organizational variable. The underlying notion is that enterprises thrive by forming inter-firm partnerships that allow them to gain access to critical resources. Unlike the resource-based theory where the emphasis is on creating competitive advantage, in the resource dependency view, the emphasis is on getting access to scarce resources (Pfeffer and Salancik 1978).

24.2.2 *Using Networks to Build Alliances—Entrepreneurial Network Theory*

As per Neergaard et al. (2005), networking has emerged as a crucial problem in the study of entrepreneurship during the 1990s and is increasingly seen as a crucial component of the entrepreneurial process. Dyadic, triadic, and multiplex linkages between individuals form the structure of networks (Larson 1992). The analysis of such ties can reveal a lot about the leader's interactions with structural elements (Johanson and Mattsson 1987). According to Johansson (1988), different relationships and resources are needed as a business is established and developed over time. Additionally, attributes like dynamism, advancement, and change are not only accurate at the level of a lone entrepreneur but also at the level of a network made up of numerous people. Such joint efforts on gathering information permit every businessperson to incorporate outer information to her own interior information venture and accordingly build the likelihood of winning the challenge (Jost 2021). Comparably work done on obligations of trust and responsibility between partners has revealed significant insight into network communication. These various network methodologies produce various understandings yet have altogether different beginning stages as for the choice of partners (Anderson et al. 2007).

Utilizing the data that the business accumulates over time through ongoing relationships with clients, the market, and other participants is a key component of the network approach. The fundamentally competitive strategy for these small businesses to compete with their unfamiliar rivals is to enter a business network in the unfamiliar market through growing close and entrusting associations for certain clients, which permits a decrease of existing data deviations about the market and defeating their fundamental weaknesses (Odlin and Benson-Rea 2017) provide examples of SMEs in various businesses in New Zealand. The discussion that resulted revealed that both conventional models of partner selection (such as the Transaction Cost Approach) and the model of rapid entrepreneurship found the network approach to be complementary (e.g., Inter-firm Collaboration Theory). Spence and Crick (2006) support this blending of the network approach and other partner determination models, arguing that no single model can fully explain the partner choice interaction and that a comprehensive view of the determination cycle should be adopted, considering aspects of multiple models rather than just one.

24.3 Methodology and Search Strategy

The following paper is based on the SLR methodology using PRISMA 2020 guidelines. PRISMA guidelines are a basic set of elements for reporting in systematic reviews and meta-analyses that are supported by evidence. SLR is a methodical strategy to organizing, presenting, and synthesizing previously published papers that might aid readers in understanding the situation as it is currently and anticipated future

advancements in a particular area of research. Consequently, our research located papers that have been published and describe the influence SME leaders have on the process of partner selection in alliance formation. The step-by-step methodology utilized in this article is further explained in the sections that follow.

24.3.1 Protocol and Registration

The PRISMA guidelines formed the basis for the systematic methodology utilized in this investigation. The paper’s title and abstract are written in accordance with the established norms. The review objectives were established appropriately in the introduction section. Accordingly, the introduction section included the primary inclusion and exclusion objectives. The main inclusion and exclusion criteria are also mentioned in Sect. 24.3.2, even as Fig. 24.1 depicts the SLR used in this experiment. We have referred to seven databases namely SCOPUS, Emerald, Science Direct, EBSCO, JSTOR, and SAGE publishing as part of our search criteria.

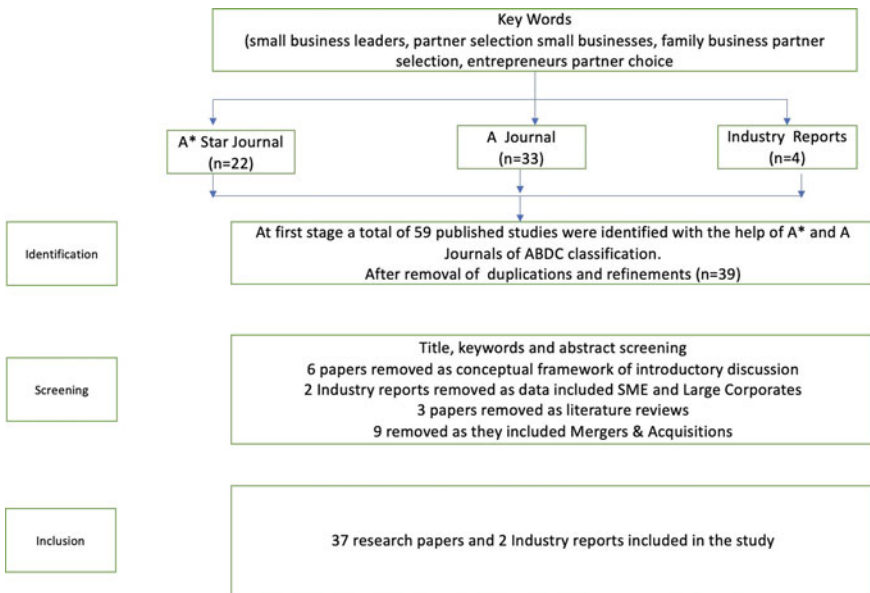


Fig. 24.1 Workflow for study selection based on PRISMA 2020

24.3.2 *Search Techniques*

In doing our search, we used the A* and A category journals of the ABDC classification. The time horizon selected was from January 1, 2019, till date. We have adopted this search criteria from (Prabhu and Srivastava 2022; Mukhopadhyay et al. 2022). According to the Indian government, 10,067 MSMEs were closed between 2016 and 2022. Just 400 MSMEs (4% of all closures) were closed between 2016 and 2019, while 9667 units (or 96%) were closed between 2019 and 2022.² According to an International Labor Organization Survey 2020³ conducted in four continents, 75% of SMEs are experiencing reduction in revenues, 33% expect to lose half their original business, and 9 out of 10 are expected to experience a cash flow shortage forcing them to look for alliance partners. The past four years have been quite turbulent for the SME sector in India, which is why we searched for papers between 2019 and 22. Many SMEs adopted for strategic alliances to help over the instability of the last four years. The current paper looks to study the role played by the SME CEO characteristics in searching for new partners. In the first step, the following keywords were used: small business leaders, partner selection small businesses, family business partner selection, and entrepreneurs partner choice. The papers derived from these keywords were selected basis the explained exclusion and inclusion criteria.

24.3.3 *Exclusion and Inclusion Criteria*

We assessed the number of studies using certain inclusion criteria. Because there are so many research publications in this field, it is important to identify what the inclusion criteria are while simultaneously addressing the PRISMA guidelines paper.

The criteria used for inclusion are

- The study should have been published between Jan 1, 2019, till date
- The study should have been published in English
- The paper should have applied the leadership role in partner selection of an SME strategic alliance
- Entrepreneurs and family business owners/leaders are taken as proxies for SME CEOs.

Additionally, the following criteria led to the exclusion of several articles: (1) Recurring entities, (2) abstract and keyword analysis, and (3) articles relating to the conceptual/theoretical framework.

² Soni, S; 26th July 2; over 10,000 MSME shut during 2016–21 period, 96% in the past 3 years say government data <https://www.financialexpress.com/industry/sme/msme-eodb-over-10000-msmes-shut-during-2016-2022-period-96-in-past-3-years-shows-govt-data/2605518/>.

³ ILO Report 2022; the covid-19 pandemic and its impact on small businesses; https://www.ilo.org/empent/whatsnew/WCMS_749275/lang--en/index.htm.

24.3.4 *Quality Assessment*

Finally, the researchers used the quality check procedure to rate the accuracy of the information offered in a few papers. This step's major goal was to gauge the effectiveness of the papers and how they affected the SLR. We used five evaluation criteria to judge the same (1) objective significance, (2) usefulness, (3) dataset variables, (4) availability of research limitations, and (5) implications for future studies.

24.4 Results of the Study

After reviewing and analyzing the research papers, the following section describes the various findings of the study.

24.4.1 *Attributes of the Selected Research Papers*

The main traits of the papers under examination are further discussed in the first part. Considering how closely they relate to the study's primary objectives, we shortlisted 39 studies out of 59 (initial search) after a lengthy process. Here are some highlights from the publications before we respond to the primary research topics.

24.4.1.1 Specific Journal Classification

Given the large number of publications in this area of research, the inclusion criteria were used more often than the journal venue in the selection process. The researchers' primary goal was to include articles based on established rules without taking the journal venue into account. An attempt was made to make all searchable databases a part of the study. To ensure rigor, only A* and A category journals of the ABDC classification were considered as part of the literature review (Refer Fig. 24.2). The maximum number of research papers belonged to Journal of Business Research (8 papers). Considering that our study involved SMEs, there were few research papers from the domain-specific journals like Small Business Economics (six papers), International Small Business Journal (six papers), Journal of Small Business Management (four papers), and Entrepreneurship Theory and Practice (four papers). Further to ensure the contemporary nature of the study, we have only considered research papers published after Jan 1, 2019. This helped the researchers identify current and relevant themes.

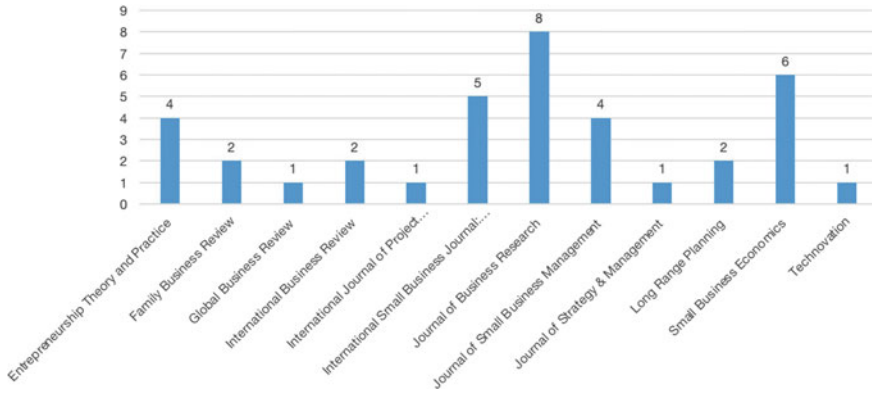


Fig. 24.2 Journal-wise classification of research papers

24.4.1.2 Part of the World Data

Typically, the chosen articles have used qualitative and quantitative methods to design, execute, and validate the importance of leadership in SME alliance partner selection before applying the same to data (refer Fig. 24.3). The participants in the case studies were drawn from eight different countries where SMEs were seeking alliance partners. Figure 24.3 shows how the dataset was gathered and used for various objectives. The majority of studies ($n = 12$) focused primarily on the American population, which has been the center of attention for SME collaborations. This was followed closely by studies on the Chinese SME population ($n = 11$). Besides, UK ($n = 7$) is an important domain for the study of SMEs. Despite SMEs contributing to the Indian GDP by way of growth and employment, there were only two studies that focused on Indian SMEs. Considering that the period from 2019 to 22 has been a difficult time for SMEs, it is important that more research focuses on this important domain.

24.4.2 Research Design

Most of the selected studies can be classified under three research domains (refer Fig. 24.4). The three-domain classification of the studies is: (1) open innovation, (2) desire to remain sustainable, and (3) internationalize operations. For instance, the open innovation theme comprises multiple studies that demonstrated factors that correlate SME leadership and their choice of alliance partner to achieving open innovation. For illustration, a study determined the frequency of knowledge gap of the SME leader and the associated ability of the partner to transfer knowledge as one of the objectives to an alliance. The theme of open innovation was observed in 37% of the research papers. The desire to internalize was the second largest

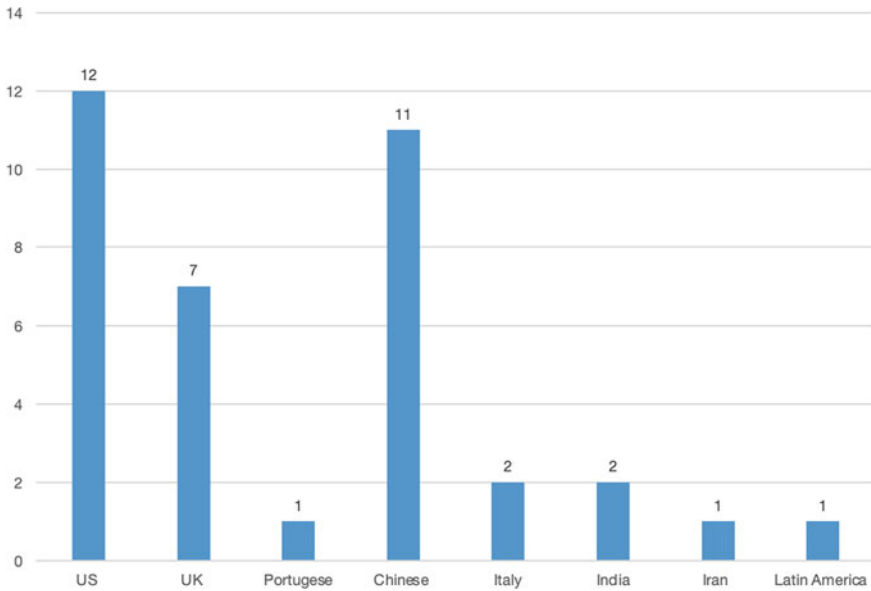


Fig. 24.3 Country-wise (region-wise) selected studies

category in the study and comprised of 34% of the papers. These articles reported on the desire of the SME leader to use the alliance to build a competitive edge to survive. The third largest category with 26% of papers was the ability of the CEOs to sustain their company. Most SME leaders preferred partners with previous international experience. The balance 3% of the papers covered a number of diverse themes which we have ignored due to their negligible number. Overall, these themes have been helpful in formulating a conceptual framework.

24.5 Content Analysis

The three themes that emerged from the assessment of the literature are examined in this section. This includes open innovation, sustainability, and internationalization.

24.5.1 Constructs

SME leaders prefer to ally with partners having a similar leadership style. Grama-Vigouroux et al. (2020), Li et al. plays an important role in deciding the alliance partner. Personal demographics like age (Sen et al. 2022) and communication skills help in deciding similar partners as it helps to create a similar fit (Blaseg et al. 2021).

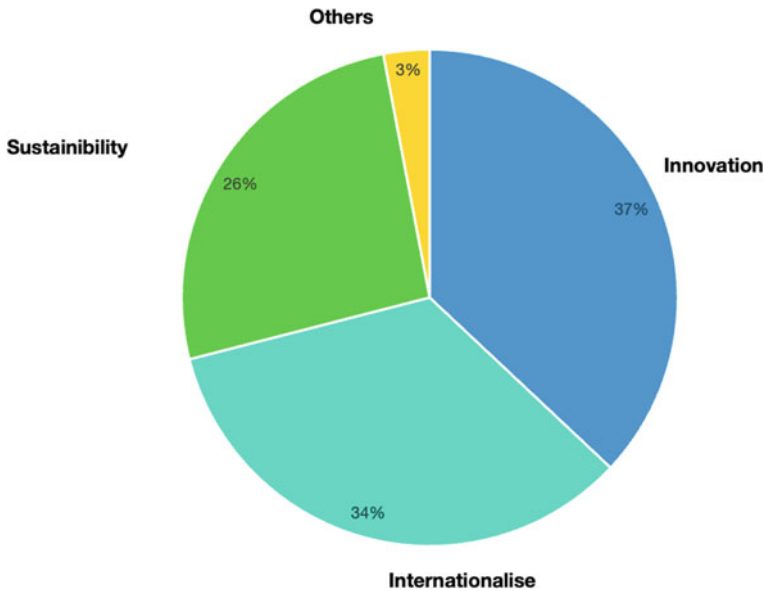


Fig. 24.4 Research domains

The previous international experience of the CEO plays major role (Chandler et al. 2021; Wu and Deng 2020) as it helps them to understand the country-specific requirements. Similarly, the ethnicity of the CEO whether he/she is an immigrant versus local is an important construct. In the case of SMEs, they depend on their CEO for financial and technical knowledge. Hence, technical knowledge (Ong et al. 2022; Jost 2021; Pino et al. 2021) and financial knowledge (Blaseg et al. 2021; Estrin et al. 2019; Vélez et al. 2022) are important traits that help in choosing a partner. Finally, the commitment of a CEO (Vélez et al. 2022) is a deciding factor.

24.5.2 Mediators

The ability and level of knowledge being transferred (Bauweraerts et al. 2019; Grama-Vigouroux et al. 2020) has a direct impact on the partner selection. The CEO being a family member of an outsider is another mediating factor in partner selection (Table 24.2).

Table 24.2 Constructs of the conceptual model

S. No.	Constructs	References
1	Leadership style	Grama-Vigouroux et al. (2020), Li et al.
2	Age	Sen et al. (2022), Nudurupati et al.
3	Communication skills	Wang et al., Masiello and Izzo, Zhao and Yang, Jafari-Sadeghi et al.
4	Previous international experience	Hilmersson and Johanson, Chandler et al. (2021), Wu and Deng (2020), Masiello and Izzo
5	Fit	Swoboda et al., Blaseg et al. (2021)
6	Immigrant versus local	Nudurupati et al., Dabic et al.
7	Technical knowledge	Ong et al. (2022), Jost (2021), Pino et al. (2021)
8	Financial knowledge	Blaseg et al. (2021), Estrin et al. (2019), Vélez et al (2022)
9	Commitment	Vélez et al. (2022), Goyal and Dubey, Feng et al., Darbi and Knott
<i>Mediating</i>		
1	Knowledge transfer	Bauweraerts et al. (2019), Grama-Vigouroux et al. (2020)
2	Family insider or outsider	Freixanet et al., Zona et al.
<i>Outcomes</i>		<i>References</i>
1	Innovation	Brown et al., Freixanet et al., Estrin et al. (2019), Radicic et al.
2	Internationalize	Freixanet et al., Pino et al. (2021), Goyal and Dubey
3	Sustainability	Estrin et al. (2019), Bauweraerts et al. (2019)

24.5.3 Open Innovation

The first theme to emerge from the review of literature is open innovation. Over the past ten years, the idea of “open innovation” (OI) has gained significant traction. Open innovation is defined as “the use of purposeful knowledge inflows and outflows to accelerate internal innovation and to extend the markets for external application of innovation, respectively” (Grama-Vigouroux et al. 2020). Companies have steadily transitioned from a controlled to an open innovation environment by forging new collaborations and alliances and by exchanging concepts, information, and technology with other institutions and people. In today’s competitive environment, an increasing number of businesses depend on partnerships to get the resources they require to meet their strategic goals. By forming an alliance with the appropriate partner, SME CEOs can facilitate the transition from closed to open innovation (Fig. 24.5).



Fig. 24.5 Innovation keywords cloud

One such means is the experience of the CEO which can help encourage innovation. Guertler et al. are of the opinion that both age and leadership style of the CEO play an important role in encouraging open innovation. Age is said to have a negative effect on open innovation. The lower the age or experience of the CEO, the greater the chances of him encouraging open innovation. Colovic has said that empowering leaders of SME and those with directive leadership stand a higher chance of selecting partners for open innovation. Ong et al. (2022) have suggested that CEO finds it difficult to communicate with new partners when they have different backgrounds in terms of expertise and experience. Thus, the communication skills of the CEO have an important role in aligning future partners with the vision of open innovation in the organization. They help convince the partner and internal stakeholders of the need for open innovation. Estrin et al. (2019), Kaandorp et al. (2020) state that age and leadership style are synchronous in nature. With age, the leadership style matures resulting in them having a significant impact on future partners and their desire for open innovation. The ability of a CEO to ensure knowledge transfer can have a direct impact on the entire process of innovation. Most innovation involves the integration to knowledge to help create new products or processes. Thus, it can be said that knowledge transfer acts as a moderating variable in the search for open innovation.

24.5.4 *Internationalization*

Internationalization is another theme encompassed in our literature. The focus of the theme is on the efforts CEOs make to find partners to grow outside of their own country. Literature has drawn attention to a number of subthemes within this approach that have an impact on customers, CEOs, and a wider supply chain. The next paragraphs provide descriptions of some of these themes. The founder, owner,

or CEO of an international SME is frequently eager to take the initiative and be in charge of making decisions toward internationalization.

The first subtheme identified is the previous international experience of the CEO. Swoboda et al. (2021) state that prior international experience of the CEO has a positive effect on the success of the international SME. Further, they add that partner selection issues have a positive impact on the strategic fit, structural fit, and (5c) cultural fit, which indirectly affects the success of an international SME alliance. One of the most important practical ramifications of prior international experience is that due to institutional escapism, understanding and assessing the degree of institutional diversity across national borders are essential to the success of SMEs and the CEOs and founders of those companies when they venture abroad (Wu and Deng 2020). Thus, strategic fit, structural fit, and cultural fit play an important role in partner selection. This fit in turn is determined the actions of the CEO. Ong et al. (2022) extend the findings of Johanson and Vahlne on the idea of liability of outsidership for SMEs with the underlying principles of business network. They state that when entering an international market, an SME has to decide on who their CEO should be. Morais and Franco (2018) highlight the effects of insider ship into immigrant entrepreneurial SME networks in an industrial neighborhood and the liabilities of outsider ship for native-run internationalizing SME. Pino et al. (2021) having based their study on Latin American SMEs stated that the more international experience that an SME CEO has regarding past multiple business transactions in various regions (or countries), the greater the perceived chance of partner selection for internationalization.

24.5.5 Sustainability

For SMEs, the concept of sustainability is explored through the notion of their ability to survive. This is further explored through the ability of the CEO to access key resources needed for sustainability. Barrett et al. (2021) state that a CEO with science/technical background would be better able to integrate the knowledge needed to sustain. This proposition is further taken forward by Stevenson et al. (2022) who say that besides technical background, a CEO should also have a financial background. This they say with the logic that most SMEs being small organizations, the onus most often falls on the CEO to maintain financial sustainability. According to early research in this field, equity crowdfunding (ECF) is frequently a secondary or backup funding source that comes after other sources in a pecking order (Stevenson et al. 2022). Blaseg et al. (2021) theorize that that the quality of a CEOs bank connections, as well as the availability of equity investors, will affect their choice of partner. Most SMEs find it difficult to avail credit from traditional banks and are more likely to look for newer venues such as equity crowd funding as a means to avail credit. Another important aspect of sustainability is the commitment of the CEO. In case of family-owned small businesses, of the CEO is from the family the level of commitment is much higher as compared to an outsider.

24.6 Discussion

The current results in the literature on the role of SME CEOs in alliance partner selection have been found and synthesized in this SLR. Three major themes on the same—open innovation, internationalization, and sustainability—emerge from the content analysis. The efforts made by SME CEOs while looking for alliance partners are largely responsible for open innovation, internationalization, and sustainability, as was addressed in the content analysis section. According to this study, when the techniques are used together, they provide us with insight into the role that SME CEOs perform. Consequently, a conceptual framework (Fig. 24.6) is created to describe how these behaviors interact from the perspectives of Inter-Firm Collaboration and Entrepreneurial Network Theory.

As indicated in our theory section, we have adopted and adapted the Inter-firm Collaboration Theory with the Entrepreneurial Network Theory. The Inter-firm Collaboration Theory lays emphasis on resources-based and resource dependence as its subthemes. We have extended this theory to partner selection by identifying open innovation, internationalization, and sustainability as key outcomes. The emphasis of the resource-based view is on creating competitive advantage. Open innovation and the decision to internationalize our examples of creating competitive advantage using resources. The resource dependency view states that an organization needs to get access to scarce resources to survive. We extend this theory to sustainability as the

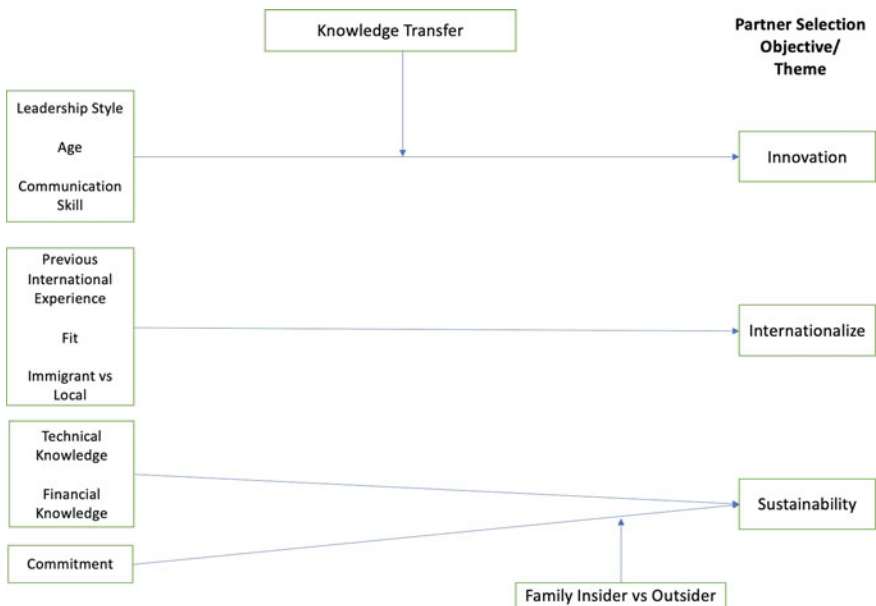


Fig. 24.6 Conceptual model on role of SME CEO in alliance partner selection

basic objectivity is to get access to scarce resources such as technical and financial knowledge.

The roles played by the CEO are highlighted basis of the Entrepreneurial Network Theory. The CEOs can capitalize on the Entrepreneurial Network Theory to build networks which lead and help them in alliance partner selection. These networks are linkages of the individuals that form them. Thus, as a key linkage, the CEO becomes an important part of the network. His demographics, capabilities, and commitment to the partner selection process are pivotal for its success. Therefore, it is essential to work with CEOs to choose alliance partners in order to promote innovation, internationalization, and small business survival.

Overall, this conceptual model integrates the Entrepreneurial Network Theory with Inter-firm Collaboration Theory. The partner selection themes have been identified using the Inter-firm Collaboration Theory which focuses on resources as a key means, while the CEOs impact has been identified using the entrepreneurial network and its concept of linkages. This SLR presents some recommendations for practice and research in SMEs. The ability of the CEO to direct partner selection within SMEs is an important finding of the review. Regarding the industry's impacts, our study offers a number of strategies through which SMEs could select alliance partners that significantly affect their overall sustainability and competitive advantage.

24.7 Limitations and Future Research

There are certain limitations to this study. First of all, the review only considered academic journals and just two industry reports; however, future research may benefit from considering a wider range of published works, including trade journals, industry reports, books, book chapters, and reviews. Second, research in the future would benefit from utilizing a longer time frame than the three years used in this study. Nevertheless, despite these drawbacks, we think that this analysis is thorough, perceptive, and adds to our understanding of the role performed by SME CEOs in the choice of alliance partners. Third, the conceptual model given in the paper would have to be empirically tested. Future research could extend to doing the same by empirically testing the same on SMEs in India.

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Chapter 25

Sustainable Tourism with Small and Medium Enterprises: A Bibliometric Analysis and Literature Review



Naik Swati and Chanda Ruby

25.1 Introduction

Small and medium-sized enterprises (SMEs) dominate tourism industry by its number (Clarke 2004). They constitute 99% of all firms (Prashar and Sunder 2020). SMEs play a key role in contribution towards quality tourists experiences in the tourism destination (Clarke 2004). Even though sustainability acts as an important factor for harmony of future generations, still businesses have always given importance to economic growth and have left environmental sustainability aside (Escoto et al. 2019). All the companies whether large or small sized are part of sustainability issue, and hence, they have to focus on sustainable business activities. Even though SMEs are small businesses which implies to the assumption of less environmental degradation, they count to the total of 80% of globally registered companies (Battistella et al. 2018).

Since most of the research studies have focused on larger companies in hospitality industries, there is a need to put a focus on small businesses and operators to achieve sustainability (Calisto et al. 2021). Small businesses are very slow in adopting environmental practices but they have very large role in polluting the environment. SMEs from all economic sectors contribute to 70% of total industrial pollution (Clarke 2004). Preservation of environment demands engagement of small and medium enterprises to inculcate sustainable practices in their businesses (Reyes-Rodríguez 2021). Very little evidence is known about tourism SMEs about their contribution to destinations' sustainability (Roberts and Tribe 2008). Even with high number of SMEs, studies on sustainability of SMEs are scarcely developed (Battistella et al. 2018).

The objective of this study is to review the research studies conducted on tourism SMEs related to sustainability, to know the focus areas and to find the research

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gaps for future studies that will help to strengthen the literature on environmental sustainability in tourism SMEs.

25.2 Methodology

The maximum and the most impactful publications in the field of tourism and sustainability are found in the databases Web of Science and Scopus (Rodríguez et al. 2020); hence, papers were selected from these two databases. Booleans and keywords were used to search the research papers. The keywords were searched in ‘title’, ‘abstract’ or ‘keywords search’. The keywords used for search were ‘small and medium enterprises’ or ‘SMEs’ and ‘Tourism’ and ‘Sustainability’. The time frame used was from the first publication on the topic till June 2022. Initially, there were 112 results in Web of Science database with the keyword search and 88 from Scopus database. The papers were filtered out according to their relevance to the field, i.e. sustainability of tourism SMEs. Research articles published in journals and conference papers were used for the analysis. Book chapters, white papers, etc., were excluded from the analysis. The research papers published only in English language were considered. The final number came down to 81 papers from Web of Science and 37 papers from Scopus database. The papers which were repeated in both Web of Science and Scopus database were filtered and considered only once to avoid duplication. The culminated papers reached to the total of 118 research papers.

The bibliometric analysis of the papers was conducted using software Bibexcel and VOSviewer. Bibexcel was used to make frequency analysis of journals, year of publications and type of publication. VOSviewer was used in mapping of the keywords. Density mapping and keywords co-occurrence strength were done using VOSviewer software. The research papers having tourism SMEs and environmental sustainability as their focus areas were considered for the review of literature. Review was done to know the areas in which the research is conducted, the methodology used and the resulted outcomes.

25.3 Results

The list of journal-wise publications regarding to sustainability of tourism SMEs is given in Fig. 25.1. Figure 25.1 represents the total number of publications relating to sustainability of tourism SMEs published by the different journals. The Journal Sustainability has the highest number of papers published with 24 publications. Journal of Sustainable Tourism has total of six publications, and African Journal of Hospitality, Tourism and Leisure has four publications each. The other journals have one publication each in the area of environmental sustainability.

Figure 25.2 represents citations received by journals including all the databases. Journal Sustainability, which has highest number of publications, received the highest

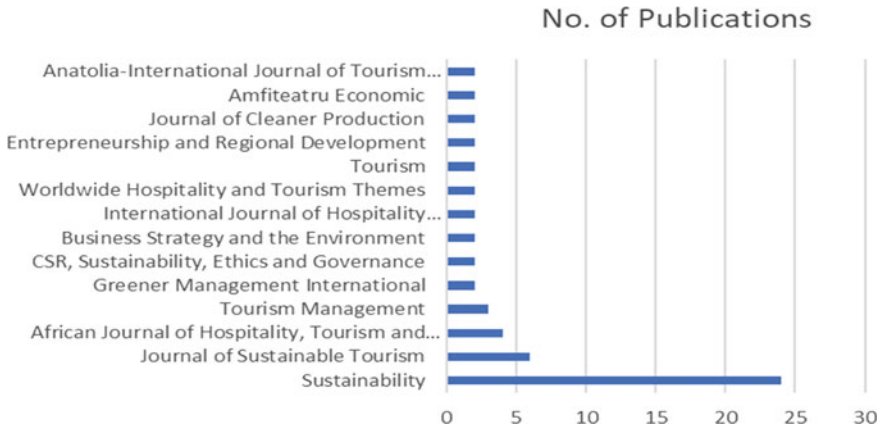


Fig. 25.1 Contribution of journals in publications relating to sustainability of tourism SMEs

number of citations adding up to 160 times preceded by Journal of Cleaner Production by 130 times. Even though the Journal of Cleaner Production has less number of publications compared to other journals, it has achieved more citations. Journal of Sustainable Tourism with rank of second in number of publications has received 101 citations.

Figure 25.3 represents year-wise publications on sustainability of tourism SMEs. It can be noted from Fig. 25.3 that year-wise publications on the topic regarding sustainability in tourism SMEs have been increasing. The publication on this topic started in 2000 with a total number of two publications. The total number of publications in 2021 was 17 articles. Ten articles have already been published by the middle of current year 2022. The increasing trend of publications can be seen in Fig. 25.3.

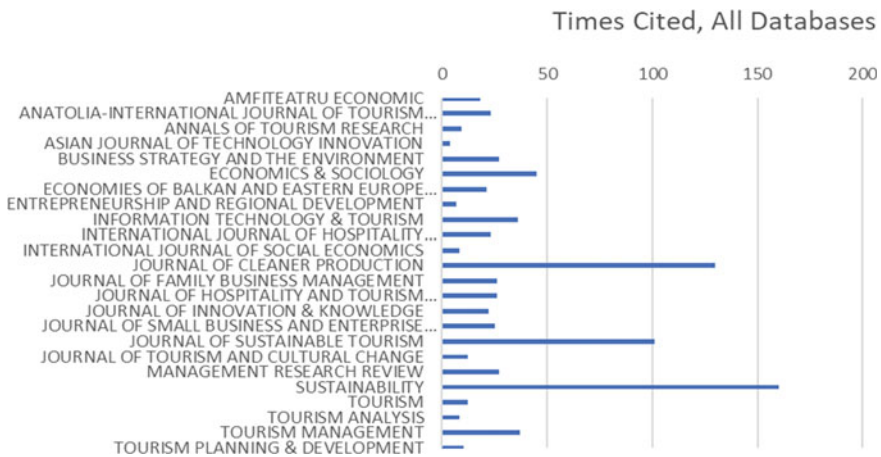


Fig. 25.2 Citations received by the journals

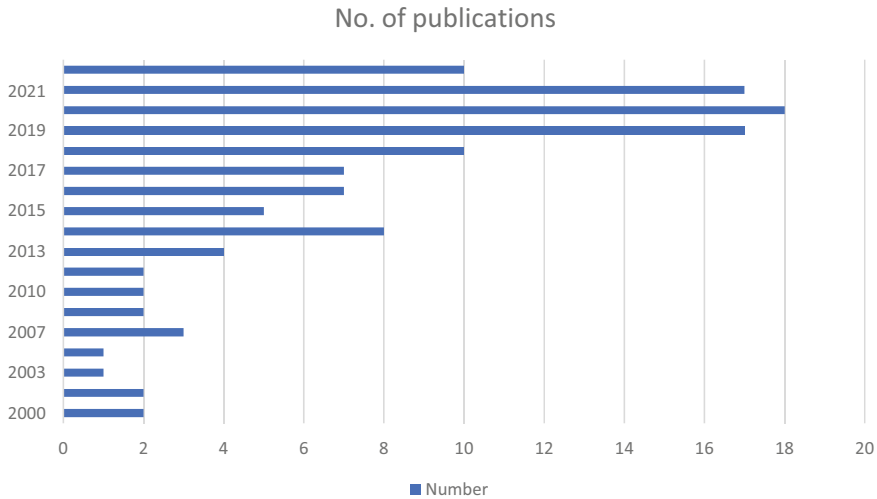


Fig. 25.3 Year-wise publication on sustainability of tourism SMEs

Table 25.1 Type of publication on tourism SMEs

Type of publication	Number
Article	98
Conference paper	20
Total	118

Table 25.1 shows the type of publications on sustainability of tourism SMEs published in the journals. It can be viewed from Table 25.1 that there are 98 number of articles and 20 conference papers based on sustainability of tourism SMEs.

According to the results of Fig. 25.4 and Table 25.2, the most used keywords are sustainability, tourism, performance, SMEs, medium-sized enterprises, CSR, management, entrepreneurship and innovation. Comparatively, keyword ‘environmental tourism’ has less co-occurrence.

The research studies focussed on environmental sustainability of tourism SMEs were selected for the review of literature based on available data on authors, their topic, location of research, main variable for research and the findings. It was found that the focus areas of research in lines of environmental sustainability in tourism SMEs were water management, energy management, circular economy, owners’ motivation for environmental sustainability, sustainability indicators, environmental practices, green branding, challenges to include environmental sustainability practices, sustainability models and competitive advantage by following sustainable practices.

The research conducted under sustainability of tourism SMEs by various authors is divided into the following headings to get the better understandings of the research conducted and their focus areas.

25.3.1 Circular Economy in Tourism SMEs

Mura et al. (2020) studied circular economy practices implemented by tourism SMEs in manufacturing, tourism human services, plant engineering, ITC and other non-declared sectors in Italy. They studied enablers and barriers for implementing such practices using multi-method approach. Only 6% of the data collected belonged to tourism sector and circular practices implemented in tourism sector appeared to be at quite lower percentages. Circular economy (CE) practices were not implemented by SMEs as they should have been. Only waste separator practices were widely followed, i.e. 84% and rest of the other practices account to only 21%.

25.3.2 Challenges to Adopt Sustainability Practices

Battistella et al. (2018) adopted a case study of yacht tourism in European region to seek the challenges faced by SMEs in transforming their business to sustainability. Fotiadis et al. (2013) studied perceptions of constraints and benefits of small and medium tourism entrepreneurs in Greece. High investment and uncertain payment of cost was holding them behind for achieving sustainable business. Hassanli and Ashwell (2020) studied contribution of small accommodation providers to sustainability in South Australia by conducting in-depth interviews and found drivers and challenges in participation in sustainability.

25.3.3 Competitive Advantage by Adopting Environmentally Sustainable Business

Iraldo et al. (2017) studied how greening strategies can help gain competitive advantage by tourism SMEs. 317 HORECA (Hotel, Restaurant, Cafe) SMEs were studied in Italy to find whether adopting environmental strategies can help achieve advantage over competitors and increase satisfaction of customer and motivation of employees. Islam et al. (2020) studied sustainable practices adopted by SMEs tourism accommodation firm and its impact on competitive advantage over the firm. Empirical research was conducted using key factors such as collaboration, innovation, employee cultural, infrastructure in technology, intermediary's sustainable practices in tourism, support of top management, government policy and locals' attitude. Escoto et al. (2019) found that micro, small and medium enterprises (MSMEs) following sustainable practices have seen increase in their competitiveness towards their stakeholders in Baja California.

25.3.4 Sustainability Indicators

Silveira et al. (2021) found the need for importance of sustainability in Portuguese tourism SMEs. They conducted a study to find sustainability indicators for Portuguese tourism SMEs. Thirty-five critical indicators on four dimensions, i.e. economic, social, sustainable management and environment were identified. Medina-Munoz and Medina-Munoz (2000) studied the contribution of economic, environmental and socio-cultural contributions of SMEs to sustainability in the Canary Islands.

Akrivos et al. (2014) researched on adaptation of sustainable practices by entrepreneurs in tourism in Evritania. Data was collected from 74 entrepreneurs to find the influence of sustainable tourism development and running the tourism business. Roberts and Tribe (2008) developed sustainability indicators for tourism SMEs by studying published frameworks and peer-reviewed case studies to know the contribution of tourism SMEs to sustainability. Hojnik et al. (2020) have given sustainability indicators for yachting industry by conducting interviews of SMEs and experts from Croatia, Italy, Greece, Portugal, Cyprus, Slovenia and Spain.

25.3.5 Environmental Sustainability Practices

Buffa et al. (2018) studied the adoption of environmental practices by small and medium-sized hotel enterprises. Operational communication and organizations dimensions were analysed, and the effect of public incentives on carrying out of environmental practices was studied. The research was carried out in Trentino, Italy, with 247 samples from famous traditional tourism destination.

Carneiro et al. (2016) studied sustainability in dimensions of economy, environment, socio-culture, technology and policy. They conducted 15 face-to-face interviews in Portugal tourism SMEs. They found that some SMEs have already adopted sustainability practices. Range of sustainable management practices was identified for sports tourism managers and destinations.

Calisto et al. (2021) conducted qualitative research to find the difference in sustainability practices between smaller hotel chains and their global counterparts. Sharafizad et al. (2022) conducted study on link between local embeddedness and sustainability embeddedness orientation by conducting 26 interviews on regional small firms. It was found that large hotel chains were more prone to adopt sustainable practices.

25.3.6 Awareness and Initiatives for Sustainability

Vernon et al. (2003) involved with focus group of tourism SMEs in South East Cornwall to know their awareness, understanding and adoption of sustainable practices.

They have highlighted the need for awareness and integration of sustainable practices to business. Batle et al. (2018) made exploratory research on environmental initiatives in Mallorca.

25.3.7 SME Owners' Motivation

Bressan and Pedrini (2020) studied impact of owners'/managers' values on implementing practices of sustainable-oriented innovation in micro and small businesses of tourism and hospitality. A qualitative method of research was adopted by interviewing 25 owners/managers. Tomasella (2015) carried out qualitative research in Ireland to find out the effectiveness of learning tools to carry out sustainable practices in small and medium tourism enterprises. Internal factors like goal orientation, locus of control, self-efficacy and external factors like management skills and sustainability learning were studied to know the influence on sustainability engagement.

Kornilaki and Font (2019) explained the influence of socio-cultural and industrial norms over the sustainable behaviour and intentions of owners/managers of small tourism businesses. Kornilaki et al. (2019) conducted research to know the motives to follow sustainable practices by some small firms in tourism and the reasons for not adopting such practices by others. The study was conducted in Crete, and the role of self-efficacy and other situational constraints effecting the sustainable behaviour of small firms' owners was explained.

Stansfield et al. (2020) conducted interviews with eight New Zealand hospitality artisan entrepreneurs to explore sustainability in their enterprises. Sustainability consciousness was found to be important driving motive. Font et al. (2016) conducted survey on 900 tourism firms in 57 European protected areas to find their sustainability motivations and practices. It was found that small tourisms were more involved in eco-savings related practices.

25.3.8 Sustainable Tourism Model

Musavengane (2019) applied theory of planned behaviour to understand the responsible tourism among the small budget hotels in Johannesburg West Rand Region, South Africa, and formulated the 'Best Responsible Tourism Model'. Rubio-Mozos et al. (2020) conducted qualitative research to provide Sustainable Strategic Management Model (SSMM) for the Fourth Sector (4S). This research was specifically conducted by examination of two focus groups of SMEs hotel companies so as to help them in contribution to 2030 Sustainable Development Goals (SDG) agenda.

Badoc-Gonzales et al. (2020) conducted documentary analysis in Yolanda (Haiyan) areas and revealed that government has failed to include MSMEs in the sustainable tourism plan, and hence, it has failed to achieve sustainability in tourism and pillars of SDG by UNWTO. Future tourism plans have to include MSMEs

because they have potential to achieve sustainability in tourism. Garay et al. (2019) explored decomposed theory of planned behaviour on 300 accommodation firms' managers to know its relation with water-related innovation. Galvez-Acevedo et al. (2020) developed an associative ecotourism model for SMEs in Peru to develop sustainability in rural tourism.

25.3.9 Branding

Woodland and Acott (2007) examined the criteria for local branding scheme. Perceptions of sustainable tourism, fears, awareness of tourism impacts and local branding were found to be key criteria of local tourism branding scheme of small tourism businesses in South Downs' protected areas of South East England.

25.3.10 Sustainable Energy Management

Jaroszewska et al. (2019) study focussed on sustainable energy management in the Polish coastal area of the South Baltic region using interview method. Energy management problems were examined for sustainable development of tourism SMEs.

25.3.11 Sustainable Water Management

Alonso and Ogle (2010) concentrated their study on water management of small and medium businesses of tourism and hospitality sector. Interviews were carried out with ten managers/operators of Swan Valley region, Western Australia. Bouras et al. (2021) developed a tool for Mediterranean coastal area SMEs which allows them to self-evaluate sustainable water management. Kasim et al. (2014) studied internal and external barriers faced by small and medium businesses in sustainable water management. The 4R model of water management was suggested with an example of case study of Malaysian resort.

25.3.12 Supply Chain

Carrigan et al. (2017) examined the role of small tourist food business and their sustainability in destination and over local food supply chain in England using interview method. Authentic lifestyle and intrinsic motivation were found to be the major drivers for social change in food supply chain.

25.3.13 Sustainability Development Goals

Scheyvens et al. (2021) conducted case studies on tourism SMEs of Fiji, Australia, and New Zealand to know whether their operating standards are towards the achievement of Sustainable Development Goals. Intrinsic connection of indigenous tourism with nature and culture makes the destination appropriate to follow the lines of Sustainability Development Goals.

25.4 Discussion

The main aim of this paper was to find the areas in which research was done on sustainability of tourism SMEs. The research papers for analysis were selected from the Web of Science and Scopus databases using the keywords search. The papers were filtered for the accuracy of the topic and duplication, which accounted to total of 118 papers. The analysis was conducted using Bibexcel and VOSviewer software. Journal 'Sustainability' is the top publisher of the related topic. The research on sustainability of tourism SMEs is gaining importance, and publications have been increasing over years. Sustainability is the overlap of three dimension environmental, social and economic, but according to keyword search, most of these researches are concentrated on business sustainability. Environmental sustainability is still in nascent stage of research literature and needs to be developed considering its importance.

From the review of literature, it can be noted that environmental sustainability topics covered under tourism SMEs are related to water management, energy management, circular economy, owners' motivation for environmental sustainability, sustainability indicators, environmental practices, green branding, challenges to include environmental sustainability practices and sustainability models, and competitive advantage by following sustainable practices. It is found that following environmental strategies in business can increase the competitive advantages (Iraldo et al. 2017; Islam et al. 2020; Escoto et al. 2019). Most of these researches are based on qualitative methodology of research. The focus areas can be widened to cover more environmental sustainability issues, practices and impacts. Most of these researches are conducted in European regions, and the other developed, developing and under-developed regions have to be covered globally, as sustainability is the global issue and it cannot be achieved region-specific.

25.5 Conclusion

The study on competitive advantage shows that there is a competitive advantage for SMEs by including sustainability practices into their businesses. Researches have been conducted to find environmental sustainability indicators for tourism SMEs.

There is need to conduct empirical research on whether SMEs are following such practices and whether they are heading towards sustainability and receiving competitive advantage. The sustainable model framework has been given by various research as highlighted in this paper, the next line in the literature can be the outcomes of following such models and to know their impact. Psychological factors which affect the owner's motivation to add sustainability practices to business have to be explored because owners are the decision makers for SMEs, and hence, owner should be the focus point of research so as to encourage them to include sustainability practices in the businesses. Most of the research on CE have been conducted on large firms and prevailing linear economy of SMEs can bring negative impacts (Cantú et al. 2021). Circular economy represents source of value creation and business opportunity rather than increase in cost for SMEs (Mura et al. 2020). Circular economy is gaining importance in sustainability studies in various sectors; the application on tourism SMEs has to be done to reach the SDGs goals 2030. The other regions apart from Europe which are tourism based have to be considered for study to gain a global scenario of environmental sustainability of tourism SMEs.

25.6 Limitations

The research papers are selected only from two databases, i.e. Web of Science and Scopus. The research papers published only in English language are considered. Hence, some literature available on other databases and languages is not considered for the study.

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Chapter 26

Assessment of Knowledge Management in Small Businesses: The Examination of Support, Rewards, and Empowerment in Organisations



Amitabh Patnaik, Avinash Pawar, and Alekha Panda

26.1 Introduction

Knowledge management has been with people since the evolution of the human being and the methods used to handle it have existed (Jashapara 2011). Managing knowledge correctly is increasingly important in today's knowledge-based economy (Dalkir 2005). Many government agencies are currently striving to transform into knowledge-based ones (Willem and Buelens 2007). Any business, private or public (Arora 2011), can benefit from adopting and implementing knowledge management approaches in this endeavour (Špaček 2016) and play a significant role in enhancing their operations (Arora 2011). In order to integrate knowledge management into the business, every organisation has to follow four basic phases. Firstly, these organisations must focus on developing knowledge within the organisation, and they must produce information within the organisation. Then they must preserve the knowledge so it can be retrieved easily when the requirement arises. The third phase involved the transfer of knowledge, otherwise known as dispersion among the workforce and execution of knowledge in the organisation (Alavi and Leidner 2001). Knowledge management supports social work companies in more ways than just raising profits and competitive advantages; it also adds value to services and improves well-being, societal effectiveness, and overall welfare (Myers 2014; Ortenblad and Koris 2014). Past researchers have studied organisational elements that promote successful knowledge implementation, and they are implemented and recognised as the support of management (Yew Wong 2005), incentives (Ajmal et al. 2010), and employee empowerment (Akbari and Ghaffari 2017). Knowledge management conceptualisation is quite easy but when it comes to the implementation within the organisation,

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it becomes more critical to create value within the organisation and the research on the implementation part has received little attention (Hamann and Basten 2019).

This is why we believe knowledge management and knowledge application in the public sector, as well as in private organisations, are of critical importance. Knowledge management helps organisations impact public policy through the more systematic and effective capture, diffusion, transfer, and implementation of knowledge (Riege and Lindsay 2006), which has the potential to improve social work services and programs. Organisations, particularly small and medium-sized enterprises (SMEs), have several problems implementing or maintaining KM projects. There are several explanations for this failure. First, these businesses lack strategic alignment; they are not in the process of ensuring that their structure and resources are appropriately employed in order to achieve their goals. Second, most SMEs do not comprehend the idea of KM. They are mostly concerned with technology rather than the fundamental structure of KM. This unreasonable expectation resulted in an overemphasis on technology. As a result, they must overcome the issues associated with the KM program. They needed to manage their knowledge workers efficiently and align themselves with their long-term goals. This allows organisations and practitioners to use critical success factor approaches for identification, comprehension, and overcoming the challenges of implementing KM in these organisations. The critical success factors are the few areas where change should be concentrated rather than the entire company. Excellent success in these areas will result in significant development for the organisation. As a result, SMEs should concentrate on this area in order to adopt KM successfully in their organisations.

According to the Government of India, any companies that have an annual turnover of not more than 50 crores and an investment of not more than Rs.10 crore in plants and machinery or equipment are considered to be small-scale enterprises. The medium-scale enterprises are companies that have an annual turnover of not more than 250 crores and an investment of not more than Rs. 50 crore in plants and machinery or equipment (MSME 2020). Moreover, in the case of micro and small-scale industries, knowledge management is rarely mentioned in discussions. In these firms, most decisions are mostly made by business owners. Hence, we can say that they have mostly quanto-centric culture and approaches while running the business. A quanto-centric mindset dominates the firms. Qualitative research and other approaches to knowledge-building are marginalised by the very mechanisms (e.g. policies and institutional infrastructure) that encourage quantitative research and the culture that supports it. Furthermore, these organisations prefer to rely on their existing knowledge and practices rather than embracing new ways of maintaining and collecting data. This further complicates the implementation of knowledge management (Barrett 1999). Therefore, establishing an undiscovered research topic is necessary for the successful implementation of knowledge management in micro and small-scale firm. Many questions remain unanswered regarding top management or owners' ability to effectively manage their own and other people's knowledge (Austin et al. 2008; Leung 2014). There is also a paucity of serious debate on knowledge management in the literature on SMEs (Edge 2005).

The SMEs have a different organisational structure than large corporations. Personal or family ownership, a small market to serve, informal business practices, the occurrence of personal relationships, and a scarcity of capital and resources are all important characteristics of SMEs. Almost all SMEs have a flattened organisational hierarchy, and communication between management and employees is direct. The organisation benefits from a limited responsibilities division, allowing for greater work flexibility. This flattened organisational structure allows for greater employee flexibility, coordination, and cooperation. Hence, the owner of the majority of SMEs is the strategic initiator. Management support is critical for the organisation's adoption of KM. In SMEs, the owner formulates the organisation's mission and vision, establishes work procedures, and allocates resources to complete the process. As a result, if the owner sets the tone for KM, it will be easier for SMEs to adopt KM. Because small and medium-sized enterprises (SMEs) have limited capital and resources, they focus on niche market strategies. Instead of focusing on a broad geographical segment, they concentrate on local, regional, and a few global markets. Due to a lack of resources, SMEs cater to specific product lines for their customers. Because their numbers are easily countable, they can maintain healthy customer relationships. As a result, SMEs rely heavily on word-of-mouth advertising for growth. When compared to large corporations, SMEs have a less standardised work process. Their processes are more adaptable, and they typically use general-purpose machinery rather than sophisticated machinery. They are primarily concerned with operational processes and have little regard for strategic processes.

According to previous studies, management support (Yeh et al. 2006) and incentives (Yew Wong 2005) have been found to have a significant impact on knowledge implementation. Further empirical research into integrating these two conceptions is needed to understand better knowledge management techniques in micro and small-scale enterprises. Knowledge management techniques are also improved when employees are empowered (Hasan 2012). Therefore, our research focuses on determining whether there is a direct link between management support and incentives and knowledge implementation. In addition, we investigate the moderating influence of employee empowerment on the link between managerial support and incentives and knowledge application. We tested our theories in micro and small-scale firms, where we analysed data from 284 managers and staff quantitatively. We know that the common method bias may influence several associations in our model and hence constitute a methodological challenge because all of our data for these variables originated from single respondents in a one-time survey.

As a result of our research, we are hoping to add to the already sparse body of information concerning knowledge management in small and micro enterprises by conducting theoretical and empirical research. Our study hopes to fill this gap in our understanding of how managerial support, incentives, and employee empowerment all affect the ability of employees to integrate new knowledge. For example, in this approach, we are responding to a lack of research and making a theoretical contribution to the field (Al Ahbabi et al. 2019). Knowledge is the primary source underlying the operation of all organisations (Hislop et al. 2018; Kogut and Zander 2003). Another purpose of our research is to continue the work of Kahn (1993), who began

to investigate how professional caregivers may organise more effectively, in particular, how they can exchange (or transfer) and utilise information to provide better service. In small businesses, knowledge management is a promising new subject of study, thanks to this increased emphasis. In addition, by focusing on these companies, our research extends beyond past studies on knowledge management in the public sector and large-scale industries, which are primarily undertaken in the education and research sectors (Massaro et al. 2015). The third purpose of our research is to develop a new methodological framework by employing a quantitative approach. The majority of past study on management themes in this industry has used only qualitative methodologies, namely case studies (Downes 2014).

Knowledge management is a strategy that identifies valuable and usable information and uses it to extract key knowledge that can be utilised to make strategic decisions for the firm. KM is the process of integrating management choices with technology systems, which increases the efficacy of judgments while also shortening the time it takes to make such decisions (Jashapara 2011). It is a managerial activity to create, transfer, store, and practice knowledge known as “knowledge management”. The idea is to provide employees with real-time data so they can react correctly and make informed decisions to help the company achieve its objectives (Hicks et al. 2006). Recently, organisations have seen an increase in the importance of knowledge and knowledge management (Willem and Buelens 2007). Organisational culture, leadership, management support, information-communication technologies, incentives, and performance measurement are key aspects that enable the application of knowledge management (Lee et al. 2012). Because it is the primary driver of the successful implementation of knowledge management in general, changing organisational culture is regarded especially vital in micro and small organisations (Riege and Lindsay 2006). However, in the public and private sectors, distinct obstacles stand in the way of successful implementation. A lack of operational maturity, frequent political changes, and a perpetual conflict between altruistic and organisational objectives have been recognised as impediments peculiar to the public and social work organisations (Ragsdell 2013).

The prime objective of this study is to assess knowledge management in small businesses and examine the role of support, rewards, and empowerment in organisations.

26.2 Review of Literature

In the dynamic business environment, human capital management is critical to organisational and economic sustainability. Humans are no longer viewed as cost centres but as the organisation’s most valuable asset. A high rate of attrition is inversely related to organisational performance. If an organisation’s labour turnover is high, it will incur high costs. Fewer employees with less standardised jobs result in greater worker versatility in SMEs. Human capital development is done on a need-to-know basis. The majority of SMEs’ employees are multiskilled. They are masters of none

and jack of all trades. SMEs are more concerned with the owners' ability and employees' knowledge to gain economic sustainability and competitive advantage. Large firms rely heavily on physical and financial assets for economic sustainability, whereas SMEs rely heavily on the ability of the owner and employees (Cardoni et al. 2018). In the case of SMEs engaged in manufacturing, for example, knowledge can be obtained from the employer's previous experience, production managers, quality managers, supervisors, competitors, suppliers, consultants, and customers (Vasudevan and Chawan 2014). Other sources of knowledge for these SMEs include trade shows, social media, knowledge forums and portals, books, research papers, and so on. The ultimate stage of a knowledge seeker's effort to address an issue is called knowledge implementation (Bock et al. 2006). Knowledge implementation is the phase in which knowledge is turned into something useful for the company (Downes 2014). Another way of saying this is that actual solutions to problems can only be found when knowledge is put into action. Knowledge implementation also provides businesses with valuable feedback information that can be used as a source of ongoing learning (Grah et al. 2016). An organisation's activities will be unaffected by the sheer existence of knowledge. Furthermore, newly acquired information must be used in daily activities and routines (Alavi and Leidner 2001). Knowledge implementation is hindered by a lack of managerial support and incentives (Ranjbarfard et al. 2014). As a result, we employ these two critical organisational variables (management support and incentives) as indicators of successful knowledge implementation in our research.

26.2.1 Role of Top Management in the Implementation of Knowledge Management Practices

Management is the first organisational aspect of support openly supporting and encouraging knowledge management (Downes 2014). The degree to which management recognises the significance of knowledge management and actively engages in its implementation and activities might be considered top management support for implementing KM in the organisation (Lin 2011). Top management involvement plays a crucial role in the implementation of KM. They act as facilitators (Lee et al. 2012) and play a crucial role in implementing KM in the organisation (Yew Wong 2005). Managers can substantially impact the beneficial outcomes of knowledge management in firms if they support and actively participate (Azmeem et al. 2017). Top management must provide continuing and practical support for the company's employees (Storey and Barnett 2000). Akbari and Ghaffari (2017) say that management support for knowledge management, in general, could hurt the success of specific knowledge management efforts as a whole.

Hence, top management plays a crucial role in implementing KM in the organisation. Their supports are a critical organisational component and prerequisite for all knowledge management activities' (Kulkarni et al. 2007). The implementation of KM

requires capital expenditure for developing knowledge management infrastructure, which gives a synergy for the dissipation of knowledge within the organisation and it requires management support. According to Lee et al. (2012), management support favours knowledge processing capacity. As part of their examination of knowledge process capacities, the researchers look at how knowledge can be implemented so that it may be put into practice. The positive association between management and knowledge management activities give an impetus to the implementation of Km within the organisation. Furthermore, KM improves the worker's participation within the organisation which increases the productivity of the employees. Hence, the cost incurred by the top management in implementing the KM within the organisation can be compensated by the increase in revenue due to the high productivity of the employees. In the light of the preceding, our first hypothesis is as follows:

- *H1: Support of top management significantly impacts knowledge management implementation in small organisations.*

26.2.2 Impact of Reward and Recognition in the Implementation of Knowledge Management Practices

For the implementation of any change in the organisation, employees must be motivated both intrinsically and extrinsically. Top management must be aware of the need to recognise and reward their employees for their contribution to implementing KM in the organisation (Downes 2014). Recognition and reward increase the morale of the employees. Hence, employees are intrinsic to prove themselves. They eagerly participate in the KM implementation process. People often look to incentives to gauge how much their company values its knowledge workers (Cabrera and Bonache 1999). According to Ajmal et al. (2010), general rewards for knowledge efforts can favour the success of specialised knowledge management programs. Employees' attitudes towards knowledge implementation can be influenced positively. Hence in this study, we are interested in the role of rewards and recognition in influencing employees in volume for implementing the KM process in the organisation's operations. Employees must be encouraged and their participation rewarded in order to promote knowledge management-related behaviours (Cho and Korte 2014). Additional support for employees should be provided to help them improve their abilities and to help them respond to obstacles (Černe et al. 2013). Motivating employees to take part in these events and demonstrating their importance to them are best accomplished through the use of incentives. Employees that receive incentives know that their efforts are being noticed and appreciated by the company and its leaders (Razmerita et al. 2016). Hence, rewards and recognition encourage employees' participation in the organisation, which formulates a conducive environment for

implementing knowledge management. More participation results in more contributions from the individuals in developing the KM structure in the organisation. In the light of the preceding, our second hypothesis is as follows:

- **H2:** *Reward and recognition significantly impact knowledge management implementation in small organisations.*

26.2.3 Role of Employee Empowerment in the Implementation of Knowledge Management Practices

Employee empowerment is essential to the success of any enterprise (Hunjra et al. 2011). Individuals' behaviour and outcomes are expected to be influenced by their engagement and involvement in decision-making processes. Employees feel part of the organisation, which develops a sense of ownership among themselves; hence, it can be considered a motivational tool (Meyerson and Dewenttinck 2012). One of the most widely accepted theories of employee empowerment was put forth by Bowen and Lawler (1992). According to them, employee empowerment is a multifaceted approach while delivering service to any organisation. Managers play a vital role in executing empowerment among employees. Managers percolate the mission and vision of the organisation within the employees. They share the present information about the organisation's performance and elaborate on employees' rewards and recognitions associated with their performance. This information enabled employees to understand the firm's situation and improvise their contributions to increase organisational performance. The autonomy given to the employees to make decisions that influence the organisation's performance is known as employee empowerment. As a result of this reasoning, companies seeking to embrace knowledge-based management should invest in ways to empower employees (Akbari and Ghaffari 2017).

Leitch et al. (1995) say that top management can change the way employees are empowered in an organisation by changing the structure of the organisation and giving them ongoing support. By inducing and supporting employee empowerment within the organisation, the top management aligns the organisational objectives with personal needs, which enhances the morale of the employees. Hence, top managerial support and employee empowerment have a strong and beneficial relationship for any organisation, and hence, it cannot be ignored. Any significant increase in employee empowerment requires management support (Yukl and Becker 2006). Akbari and Ghaffari (2017) have conducted many studies on knowledge management and employee empowerment. They have conducted some practical studies that have attempted to close the gap between knowledge management and employee empowerment by establishing the connection between knowledge management initiatives and employee empowerment. According to studies done by Ahmed

et al. (2003), employee empowerment has a close link to management and management support is essential to its successful implementation. On the other hand, some studies also support the assertion that the absence of management support is often to blame for firms' failure to successfully execute successful empowerment practices (Cunningham and Hyman 1999).

Employee empowerment creates a viable framework and a pragmatic approach for putting knowledge into action (Blumberg and Pringle 1982). According to the empirical research by Ahmadi et al., knowledge management implementation in any organisation hugely depends upon the empowerment given to the employees. According to the research done by Hasani and Sheikhesmaeili (2016), there is a positive correlation between the knowledge management elements and the implementation of knowledge management in the organisation. Employee empowerment develops a sense of responsibility within the employees, and their ability to deal with a wide range of situations, events, and users is seen as a strength among employees who have been given a sense of agency (Conger and Kanungo 1988). As a result, empowered employees are more likely to put their skills to good use for the benefit of the company as a whole (Chong and Choi 2005).

- **H3:** *The empowerment of employees has a significant impact on knowledge management implementation in small organisations.*

Based on these hypotheses, researchers have designed the methodology and collected the data for analysis and results.

26.2.4 Research Gaps in the Domain

Previous research suggests that top management should encourage employees to use KM in the workplace. They must develop or modify the human resource policies that have rewards and recognition for those employees who take some initiative in implementing KM. For employee empowerment in a company to be implemented, management must give proper incentives linked to employee behaviour. To put it another way, management must relate employees' performance to some financial rewards like increments in their salary, monetary incentives, and promotion, especially for the blue collars and line managers. Middle managers can start some recognition programs that can motivate them intrinsically to participate in the implementation of KM. Empowerment also needs incentives because it increases the risk and responsibility of individual employees, as well as the demands for them to execute (Goldsmith et al. 1997). As research has shown (Gkorezis and Petridou 2008), employee empowerment is favourably connected with both recognition and financial incentives. According to Spreitzer (1995), motivational incentives are critical to employees' sense of empowerment in the workplace. Furthermore, empirical studies show that incentives favour employee empowerment in the workplace (Baird and Wang 2010).

Earlier research mostly focuses on knowledge management and its impact on an organisation's performance. The interaction impact between employee empowerment and manager assistance has been overlooked in previous knowledge management research. Till now, there is no conclusive evidence on the role that employee empowerment plays in influencing the relationship between managerial support and the application of knowledge management in small-scale organisations. Even though employee empowerment and management assistance have been studied a lot in the past, these ideas, their connections, and how they affect each other still need more conceptual work. Following this argument, we identify a new research avenue. Knowledge management and social work, as well as other approaches and tools, are lacking in the available literature regarding models incorporating moderator factors. To gain a deeper understanding of the relationships between employee empowerment, incentives, and knowledge application, it may be beneficial to combine these streams. Although each concept, including empowerment of employees, incentives, and knowledge implementation, has been extensively discussed, their interplay has yet to be completely explored. Further investigation is needed to fully grasp the interaction impact of empowerment and incentives, as well as the connections between these concepts. As a result of the preceding, we believe the following hypothesis to be viable.

26.3 Research Methodology

The prime focus of this research is to discover how micro and small businesses approach knowledge management. Furthermore, the research also accesses the elements of support of top management, reward-recognition systems, and empowerment of employees in the context of knowledge management. For this study, data from 189 owners and managers of micro and small businesses is collected.

26.3.1 Instrument Development for Study

In this study, to measure every construct used, we commonly used instruments used in the scientific community. The instruments have been developed or employed by researchers on the topics under study and are well-established. The instruments used are extensively referenced in scientific literature and have been employed in recent studies; they are up-to-date and appropriate. In order to verify the instruments, they were discussed with some experienced and successful industrialists, and modifications were made according to their instructions. The instrument questionnaire is developed for each variable of top management support, reward and recognition, empowerment of employees and knowledge management implementation. In order to validate the instrument factor analysis, the KMO value was performed, and the KMO value was 0.756, which is more than the threshold value of 0.5, which indicates

that the instruments can be used for further studies. On a 1–5 Likert scale, respondents were asked how much they agreed with statements about how much management support, incentives, employee empowerment, and knowledge implementation their firms had.

The contribution of Downes (2014) assessed managerial support and knowledge management implementation. Managerial support has a three-item scale ($\alpha = 0.75$) for measuring the construct as managerial support. The statements, such as “My firm has a specific person assigned to promote KM in the organisation”. While in the case of knowledge management implementation, a five-item scale ($\alpha = 0.87$) instrument was taken. The common questions asked under this construct are “our firms take initiatives for converting knowledge into action plans” and “our seniors help us to clarify our doubts while we face any difficulty in the job”. To measure rewards and recognition, the instrument developed by Marsick and Watkins (2003) was used. Their instrument is a five-item scale ($\alpha = 0.90$) to measure how much incentives were used in the respondents’ organisations. The questionnaire includes statements such as: “Our owners or top management reward employees for new ideas”. We utilised a six-item scale ($\alpha = 0.87$) created by Bowen and Lawler (1992) to measure employee empowerment in respondents’ organisations. In this study, we focused on how managers exchange information regarding the organisation’s functioning. As a result of this knowledge, employees are empowered to make decisions that affect the direction of the company and its performance, as well as to reward employees depending on the organisation’s performance. There are phrases like “My organisation has information that is easily accessible to employees” and “In my organisation, managers often involve staff in the decision-making process”.

26.3.2 Selection of Scale

As per the objectives and designed instrument, researchers have adopted the Likert scale of measurement of the data. A Likert scale is an ordered scale from which respondents choose one option that best aligns with their view. It is often used to measure respondents’ attitudes by asking the extent to which they consider a particular question or statement. This study has three dependent variables as support of top management, reward and recognition, and the empowerment of employees. Furthermore, the independent variables are knowledge management implementation. Hence, to appropriately realise and evaluate the degree of responses from the samples, the researcher has adopted the 5-point Likert scale to measure and validate the data.

26.3.3 Control Variables of Study

Four variables were taken into consideration as control variables; they are the tenure of the manager or owner, the age of the respondent, their gender, and the greatest

degree of education of the manager or owners. Due to their importance in determining the validity of research findings, we used these control variables (Berneth and Aguinis 2016). The firm's size significantly impacts the implementation of the KM in the organisation due to the large resources available. As a result of their potential impact on an organisation's overall level of knowledge implementation, the age, gender, and highest educational level of respondents (Radaelli et al. 2011; Feingold 1994; Srivastava et al. 2006) are all included as control variables in this study.

26.3.4 Sample Design

The study goal was achieved via the use of a self-administered questionnaire. Small and medium-sized enterprises (SMEs) in the Pune region that are registered with the Maharashtra Industrial Development Corporation provided the data utilised in this study. The majority of responders work for businesses that manufacture auto accessories. Since capital expenditures and the commitment of senior management to implement KM are necessary to be effective in any size company, this strategy is aimed towards small and medium-sized businesses. The first data was gathered using convenience sampling techniques. The snowball sampling technique was used later when needed a greater sample size. A Google form including a structured questionnaire was sent to the recipient's address after a short introduction to the issue was provided. The time frame for information collection was from May 2021 to August 2022. A total of 315 persons were contacted through email to complete the survey. Due to unforeseen circumstances, 56 of the surveys could not be sent to their intended receivers. Only 259 surveys were completed after four email reminders were sent. Those who have previously responded were not included in the tally. In addition, 72 participants completed the survey incompletely, while the remaining 189 participants replied to all questions through email. More than a year was spent on this procedure.

26.4 Analysis and Interpretations

The researchers have performed the analysis and developed the interpretations based on descriptive statistics analysis and hypotheses testing of the study as below.

26.4.1 Descriptive Statistics Analysis

Regarding overall satisfaction, respondents give employee empowerment the highest rating of 3.35, followed by knowledge implementation and rewards, 3.15 and 2.98,

respectively. Management support has the lowest mean value of 2.5. All of the examined variables had correlation coefficients that fall within the range of 0.45–0.85. A significant positive correlation (0.70; $p < 0.01$) exists between rewards and managerial support, as does a link (0.27; $p < 0.05$) exist between incentives and the highest degree of education. Management support (0.80; $p < 0.05$) and incentives (0.85; $p < 0.05$) had a substantial positive connection with knowledge implementation. Management support, incentives, knowledge implementation, and the highest level of education among respondents all had significant positive effects on the degree to which employees felt empowered, as did empowerment scores of both the highest and lowest at the individual and organisational levels. The average tenure is significantly and positively linked with age among the control variables (0.45; $p < 0.01$).

Hierarchical linear regression in SPSS 24.0 analyses the collected data and the interaction effects between the variables. Using the Amos software, we applied the confirmatory factor analysis (CFA). CFA was used to improve the model's ability to fit the data. We examined the factor loadings of each item in the survey to ensure that they were statistically significant and more than the 0.50 threshold to determine whether the questionnaire had convergent validity (Hair et al. 1998). The factor loadings of all four components were found to be statistically significant and over the 0.50 level in the CFA analysis results. This evidence bolstered convergent validity. Standard loading for the construct management support and incentives are in the range of 0.60–0.79 and 0.72–0.78, respectively. The standardised loadings for knowledge implementation were within the range of 0.75–0.94. Nineteen questions on the questionnaire were utilised to measure the four constructs in our model.

The composite reliability index (CRI) and average variance extracted (AVE) are calculated to examine the dependability of the composite reliability (Fornell and Larcker 1981). The CRI of all four constructs is within the acceptable range, according to the suggestion of Diamantopoulos and Siguaw (2000). According to them, the CRI value must be above 0.6. The CRI value for all four constructs is management support (0.79), incentives (0.83), knowledge implementation (0.90), and employee empowerment (0.85). The AVE of our variables is management support (0.54), incentives (0.64), knowledge implementation (0.72), and employee empowerment (0.63) which is more than the cut-off value of 0.4. Model fit can be assessed using a variety of fit indices. CFA (the expected four-factor solution) yielded the following outcomes: $\chi^2 = 298.012$; RMSEA = 0.11; $df = 175.8$; CFI = 0.94. In contrast to the RMSEA indicator, the CFI indicator fits perfectly with the data.

26.4.2 Hypotheses Testing of Study

In this study, the first two hypotheses examine the link between management support and incentives and knowledge implementation in micro and small-scale industry. Hypothesis 3 contains employee empowerment as a moderating factor. In the current investigation, hypotheses H1 and H2 were formulated to evaluate the direct relationship between the support provided by top management and the incentives for

the application of knowledge in micro and small-scale businesses. The concepts of empowerment, which serve as moderating factors, were presented in hypotheses H3 and H4. To put our theories to the test, we used the hierarchical regression approach with a centring variable. Hierarchical regression is utilised in model 1 to determine the nature of the connection that exists between the four control variables and the independent variable, which in this case is managerial support. In model 2, we have utilised the same four control variables with incentives as the independent variables. These variables have been given different values. Two-way interaction between management support and employee empowerment is used in model 3. Similarly, two-way interaction between incentives and employee empowerment is used in model 4 as below (Table 26.1).

The results of the study suggest that a strong association exists between management support and knowledge management implementation in the micro and small-scale industry ($\beta = 0.39$; $p = 0.000$), as seen in the case of model 1. Hence, the data supports the first hypothesis that top management supports have a significant impact on knowledge management implementation in the organisation. In model 2, we tested the impact of the second independent variable of reward and recognition on knowledge management implementation. Data sets also support the second hypothesis. Rewards and recognition positively impact the KM implementation ($\beta = 0.59$; exact $p = 0.000$) (Table 26.2).

The value of the adjusted R^2 decreased when we added another independent variable, employee empowerment, while testing hypothesis 3 and 4, which indicates that there is some moderation effect. According to the output given by the hierarchical regression analysis conducted for model 3, there is a weak association between the two-way interaction of management support and employee empowerment on knowledge implementation ($\beta = 0.07$; precise $p = 0.043$). The data sets support hypothesis 3 that some positive relationship exists between management support and employee empowerment. The output of model 4 suggests that the two-way

Table 26.1 Analysis of model 1 and 2 for the study

Model 1					Model 2				
Variables	<i>b</i>	SE	β	<i>t</i>	Variables	<i>b</i>	SE	β	<i>t</i>
Tenure	- 0.03	0.04	- 0.05	- 0.72	Tenure	- 0.02	0.06	- 0.03	- 0.3
Age	- 0.06	0.09	- 0.06	0.13	Age	- 0.02	0.09	- 0.01	- 0.21
Gender	0.02	0.15	0.01	0.16	Gender	- 0.01	0.13	- 0.01	- 0.15
Education	0.01	0.1	0.02	- 0.68	Education	- 0.06	0.09	- 0.06	- 0.71
Management support	0.41	0.07	0.39	6.91**	Management support				
Incentives					Incentives	0.57	0.13	0.59	5.15**
Employees' empowerment	0.49	0.08	0.37	6.75**	Employees' empowerment	0.35	0.12	0.31	2.78**
R^2	0.753				R^2	0.712			
R^2	0.753				R^2	0.712			

Table 26.2 Analysis of model 3 and 4 for the study

Model 3					Model 4				
Variables	<i>b</i>	SE	β	<i>t</i>	Variables	<i>b</i>	SE	β	<i>t</i>
Tenure	- 0.02	0.06	- 0.04	- 0.62	Tenure	- 0.02	0.05	- 0.03	- 0.35
Age	- 0.06	0.09	- 0.05	- 0.85	Age	- 0.02	0.09	- 0.02	- 0.29
Gender	0.01	0.13	0.01	0.1	Gender	- 0.04	0.16	- 0.02	- 0.03
Education	0.01	0.09	0.02	0.19	Education	- 0.08	0.09	- 0.06	- 0.89
Management support (MS)	0.45	0.07	0.49	6.38**	Management support (MS)				
Incentives (I)					Incentives (I)	0.59	0.15	0.58	5.51**
Employees empowerment (EE)	0.51	0.09	0.48	5.69**	Employees empowerment (EE)	0.35	0.12	0.31	2.78**
MS * EE	0.04	0.06	0.07	0.043*					
I * EE						- 0.11	0.06	- 0.17	- 2.31
R^2	0.772				R^2	0.748			
ΔR^2	0.05				R^2	0.072			

interaction of reward and recognition and employee empowerment with knowledge implementation has a significant negative connection ($\beta = - 0.17$; $p = 0.036$). The resulting negative interaction coefficient indicates that the effects of the combined action of the two independent variables are less than the sum of their individual effects.

26.5 Conclusion

This research aims to discover how micro and small businesses, particularly those in the automobile and fabrication industries, approach knowledge management. The study’s variables include management support, incentives, knowledge implementation, and employee empowerment. According to 189 owners and managers of micro and small businesses who took part in surveys, the level of management support and rewards directly influences the level of knowledge implementation. Our research also found that empowering employees acted as a moderator, but the effect was small. Understanding how knowledge management is utilised in micro and smaller enterprises that produce vehicle components or other fabricated parts based on this paper’s findings might help us better understand the process. When discussing our findings with national policymakers, we should stress that developing these businesses can help alleviate the country’s unemployment problem. Our goal is to promote awareness of how important knowledge management is in small and medium-sized businesses. It is also realised that employee empowerment and its moderating effect on the direct

association between management support and incentives with knowledge implementation are the focus of our research. The help of their managers greatly enhances employees' ability to implement new knowledge. The relationship between knowledge implementation and the associated incentives is also favourable and significant. The relationship between managerial support and knowledge implementation is moderated by employee empowerment. Employee empowerment moderates the association between incentives and knowledge implementation (Hypothesis H4), but the interaction term is unfavourable. Specifically, when employee empowerment is high, knowledge implementation is at its best.

26.6 Implications of Study

The implications are deliberated with organisational and practical implications of the study as below.

26.6.1 Organisational Implications

As the study's title suggests, it aims to shed light on the critical role played by knowledge management (KM) in micro and small businesses. This study methodology supports a shift to a knowledge-based view of employees in these firms. In addition to improving the quality of services they give, knowledge and knowledge management can also allow them to increase their expertise, which can aid in their career advancement. Prior researchers tended to focus on large commercial and public corporations with a huge number of resources and the ability to mobilise these resources to develop knowledge management (KM) in the organisation. Our goal is to go beyond the standard framework of knowledge management research by focusing on those organisations with limited resources and investigating if the basic theory of KM can be implemented in these companies. Moreover, none of the previously specified constructs we studied in our research was examined to see how they related. This study contributes to the literature because it shows how management support and incentives can influence knowledge implementation in micro or small enterprises and how this might affect the aforementioned organisational goals. It appears that when employees are more empowered, the importance of incentives decreases. As a result, the overall knowledge implementation in practice may be reduced by the relationship between employee empowerment and incentives. In order to avoid this, we urge the owners and managers of these firms to refrain from their policies focusing on employee empowerment and rewards.

The research findings provided some insight into knowledge management implementation in the organisation. Based on the findings, a list of recommendations was prepared for micro and small organisations. However, even though micro and small-scale organisations struggle to get funds from commercial banks and reputed

financial institutions at lower interest rates, they can benefit from our findings by learning how knowledge management strategies can help improve the quality of services they offer. These organisations must focus on the delivery of high-quality services to their clients, which in turn improves the well-being of society as a whole. Our research found that the mean values of the four characteristics were examined at various levels like best, moderate and, at other times, low. Micro and small firms are not reaping the various advantages of knowledge management approaches, as can be seen from the moderate to low mean values.

26.6.2 Practical Implications

We utilise our research findings to provide several significant practical suggestions for the managers and staff of small and medium-sized businesses (SMEs). Although SMEs have significant financial challenges when it comes to adopting KM in their organisations, if they can roll it out in a phased way, they will reap the benefits of increased quality and productivity in their products and services. As a consequence of this, they will need to make changes within the company to successfully maximise the use of the resources that are already available (Dimovski et al. 2017) and continue fulfilling their mission of providing the highest quality service to their customers (Miller and Whitford 2007). The owners and managers of SMEs need to determine whether or not their top management supports knowledge management and the execution of activities related to knowledge management. This is important since management support has been identified as a significant success element (Azmeel et al. 2017) for knowledge management (Lee et al. 2012). If companies ignore the need for management support, there will be a considerable drop in the likelihood that the organisation's knowledge management practices will be successfully implemented (Akbari and Ghaffari 2017). These companies emphasise employee empowerment since it may also be an important component in fostering the application of knowledge and deciding the long-term success of this endeavour (Hasan 2012). However, since the interaction term in our research is unfavourable, it is important to be mindful of the possibility that advocating employee empowerment and incentives at the same time might harm the overall levels of knowledge implementation. The mere presence of information in and of itself is not sufficient (Alavi and Leidner 2001). As a result, managers are required to think about how to increase knowledge implementation, which components of knowledge management are most successful in practice, and what function these practices could have in driving greater levels of knowledge implementation. In conclusion, we believe that it is critical to have an ongoing conversation with those responsible for making policies and decisions at the national level regarding the possibility of applying knowledge management principles within the SMEs to accomplish an overall improvement in service.

26.7 Limitations and Future Scope of Study

This research has one major drawback and that has to do with the sample size. The majority of SMEs have been severely impacted by the shutdown, which is why we had such a small response to our survey. Assuming the sample size was enough and met minimum requirements, results may not be representative of the population if they were drawn from a narrow geographic region without taking into account the diversity of India. Second, we adopt a cross-sectional research approach, which has the benefit of capturing information on leader behaviour within a certain time period but the disadvantage of not following them throughout an extended length of time. Because of this, the manager's actions no longer follow any discernible pattern, and we have no way of knowing in what order the variables were originally linked. Third, since we only included a subset of SMEs, we cannot draw broad conclusions regarding the potential correlations. Consequently, it is unclear whether or not our present results apply to all industries. Potential problems with this research include participant bias and the inherent subjectivity of self-evaluation. They may provide false information to cover up their mistakes when learning. Because of this, legitimacy may be compromised. Self-reported emotional intelligence may rely on the manager's impression of their emotional aptitude, even though students may be ready to describe themselves correctly at times.

The next step in research would be to broaden the scope of investigations to draw more robust conclusions. To investigate other facets of how this information is put into practice, researchers can also invite major IT corporations to participate. Given that knowledge management is still relatively novel and under-researched in the SME sector, this presents a significant opportunity for academics and industry professionals alike. We'd want to learn more about the workers' unique perspectives on knowledge management and how it affects their day-to-day activities. For this purpose, we need to combine quantitative and qualitative research methods. Particularly, follow-up open-ended face-to-face interviews would bolster our quantitative results. Such further study would help us to overcome the restrictions brought on by our dependence on surveys, employing just Likert scale ranges, and get deeper insights into certain themes connected to knowledge management strategies. Also, we hope that future scholars will reevaluate our findings about the impact of two-way interactions. A deeper understanding would be fascinating. We propose that managerial incentives and assistance be linked to the three stages of knowledge management: knowledge generation, knowledge storage, and knowledge transfer. Moreover, the management approach used by SME executives might serve as a compelling moderating factor.

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Chapter 27

Developing Agri-tourism Based on Customer's Preferences in Tamil Nadu



S. Sarath, S. D. Sivakumar, and V. Chandrasekar

27.1 Introduction

Customer's preference varies with their experience. However, in today's experience-based economy, improving customer experience is becoming more important. There is also a major shift in customer consumption habits as a result of new tourist business trends (Zehrer 2009). It is currently stated that modern customers prefer memorable experiences to basic items (Oh et al. 2007). As a result, professionally managed experiences give significant economic value to tourist service providers (Hurst et al. 2009). Creating one-of-a-kind experiences is important for growing revenue, enhancing satisfaction and establishing customer loyalty (Verhoef et al. 2009). In this way, agri-tourism is a component of the experience economy (Sidali et al. 2015).

Many studies related to agri-tourism show that agri-tourism is a compelling economic driver for rural development and it provides employment opportunities to local people (Hurst and Niehm 2012). It benefits rural areas by providing alternate sources of income, diversifying household activities and boosting the rural population's economic activity by offering more job opportunities (Carpio et al. 2008). In developed countries, agri-tourism became popular among urban people and many farmers established agri-tourism centers on their farms to create supplementary income sources (Kumbhar and Arts 2012), but in India, agri-tourism is still in a nascent stage. Hence, developing agri-tourism resides with the knowledge of customers' preferences would provide the measures for agri-tourism development and also to cater customer satisfaction over the long run.

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Previous research on agri-tourism development has primarily focused on economic factors, neglecting the impact of preferences, which is a non-economic factor that can drive higher customer numbers and increased tourism revenues. As a result, marketing attempts to promote agri-tourism are compromised (Addinsall et al. 2017). Research in the tourism field suggests that understanding consumer preferences can contribute to tourism growth (Lu et al. 2021) and that focusing on the overall tourist experience is more effective than differentiating based on price or service (Verhoef et al. 2009). In order to enhance customer satisfaction by enhancing the tourist experience, it is essential to have a deep understanding of customer needs and preferences (Hurst and Niehm 2012). Because of the variety of customer segments, it is particularly important for tourist providers operating in rural areas.

To that end, the agri-tourism service must be adapted to the customer's preferences. This will assist to offer agri-tourism unique promotional labels and allow potential customers to recognize the activities and services related to agri-tourism (D'Souza et al. 2021). This can help to project the desired image of agri-tourism (Sahebalzamani and Bertella 2018). Therefore, this study aims to examine customer preferences for agri-tourism and identify the factors that influence it. In parallel, this study also provides implications for developing agri-tourism in Tamil Nadu.

27.2 Review of Literature

Agri-tourism is a form of tourism that involves visiting working farms or agricultural enterprises for recreational, educational, or leisure purposes (McGehee et al. 2007). It encompasses a variety of activities such as participating in farming activities, experiencing local food and markets, participating in entertainment activities on farm premises, and staying in on-farm accommodations and enjoying food services (Barbieri and Mshenga 2008). Literature defines agri-tourism as entrepreneurial efforts to increase agricultural income or value through the combination of land, labor, or capital (Tew and Barbieri 2012). It is different from other forms of farm diversification in that it involves providing value-added processing and services to visitors. For instance, there were variances in entrepreneurial motives and company structure between agri-tourism and other agricultural entrepreneurs (Barbieri 2009). Agri-tourism aims to preserve traditional connections to the land and knowledge, using sustainable farming methods, increasing farm income, preserving the environment and ecosystems, and ensuring the long-term viability of family farms (Tew and Barbieri 2012). This study aims to examine agri-tourism using a farm business diversification model to improve customer attraction during farm visits, taking into account the complexity and regional applicability of the subject.

Studies on what motivates customers to participate in agri-tourism have shown that hospitality services, entertainment options, and educational elements are crucial factors (Santeramo and Barbieri 2017). People are drawn to the novelty, relaxation, and natural beauty of agri-tourism, as well as the authenticity of farm activities (Melstorm and Murphy 2018). Additionally, factors such as hospitality services,

cultural identity, local life, fresh farm-grown food, and traditional farming methods are important considerations for people choosing agri-tourism experiences (Barbieri et al. 2016). The distance to be traveled and the amount of time intended to be spent at the destination are also considered by potential visitors (Oh and Schuett 2010).

Research on customer preferences in hospitality services has found that factors such as hygiene, safety, value, official classification, and privacy play a significant role in determining the choice of a hospitality product (Chu and Choi 2000; Gharaei and Rafieian 2012; Lu et al. 2014). Customers are increasingly seeking immersive and authentic travel experiences, moving away from mass tourism and toward rural destinations that offer serene and relaxing environments (Barbieri et al. 2016). Agri-tourism, which includes a variety of offerings such as farm tours, winery tours, and participation in farming activities, has become a popular form of sustainable tourism that promotes a symbiotic relationship between agriculture and tourism (Mohamed et al. 2015; Rogerson and Rogerson 2014). Studies have also found that agri-tourism experiences can lead to positive changes in food purchasing patterns and the development of new iconic regional agri-products (Dias et al. 2019; Kim et al. 2019). The concept of agri-tourism is seen as a way to promote the growth of rural economies by fostering collaboration between tourism and agriculture (Jose 2014).

Hence, linking tourism with agriculture as agri-tourism paves the way for supplementary income for farmers. So, it is most important to know about customer's attractive features for developing agri-tourism.

27.3 Materials and Methods

The study is taken in farm resorts located in the Coimbatore district of Tamil Nadu because Coimbatore has the highest number of farm resorts. Ten farm resorts were selected based on the maximum customer footfalls. From each resort, forty customers were randomly selected and asked to fill out the survey questionnaire. A random selection of 40 customers from each farm resort would give a wide range of their preferences for agri-tourism. Apart from agri-tourism, Coimbatore district also performed well in terms of attracting tourists based on culture, rendering hospitality, natural falls, dams, lush greenery, and agriculture (net cultivated area with various crops), and also it has the highest value and contribution over other districts.

27.3.1 *Principal Component Analysis*

Principal Component Analysis (PCA) is a technique used to simplify large datasets by converting a large number of variables into a smaller set that still contains the majority of the information from the original set. This is accomplished by mathematically altering the values of each variable by subtracting the mean and dividing by the standard deviation.

$$z = \frac{\text{value} - \text{mean}}{\text{standard deviation}} \quad (27.1)$$

The new variables that are created through this process are known as principal components, latent variables, or factors. They are calculated by taking weighted averages of the original variables. The specific values that are assigned to each row for these new variables are known as factor scores, component scores or simply scores. All of these scores are arranged in a matrix, known as the matrix Y , which is used to represent the entire data set. The equation used to perform PCA is given in matrix notation and is used to transform the original set of variables into the new set of principal components as given by

$$Y = W'X \quad (27.2)$$

where W is a “matrix of coefficients” that PCA determines

These equations are also written as

$$y_{ij} = w_{1i}x_{1j} + w_{2i}x_{2j} + \dots + w_{pi}x_{pj} \quad (27.3)$$

The way in which the components, which are a combination of the original variables, are constructed, is through the use of weights, W . These weights are determined in such a manner that the variance of the first component, y_1 , is maximized. Additionally, the variance of the second component, y_2 , is maximized, and there is no correlation between y_1 and y_2 . The remaining components, denoted as y_i , are calculated in a way that their variances are maximized while ensuring that there is no covariance between any two of these components for all i and j (i not equal to j). The matrix of weights, W , is calculated from the variance–covariance matrix, S , using a specific formula:

$$s_{ij} = \frac{\sum_{k=1}^n (x_{ik} - \bar{x}_i)(x_{jk} - \bar{x}_j)}{n - 1} \quad (27.4)$$

The correlation between the i th component, which is a combination of the original variables, and the j th original variable can be determined by using a specific formula.

$$r_{ij} = \frac{u_{ji}\sqrt{l_i}}{s_{ij}} \quad (27.5)$$

The elements of the matrices U , L , and S , represented by U_{ij} , l_i , and S_{ij} respectively, are used to determine the correlations referred to as component loadings in the component loadings report. When the correlation matrix, R , is used in place of the covariance matrix, S , the equation for Y must be altered accordingly. The revised equation is

$$Y = W'D^{-\frac{1}{2}}X \quad (27.6)$$

When D is a diagonal matrix composed of the diagonal elements of S , the correlation formula can be simplified as the S_{ij} are equivalent to one.

In this study, PCA was used to group the variables for knowing customer preferences toward agri-tourism. The selected variables such as “nearby tourist spots, natural surroundings, agricultural landscapes, value for money, venue accessibility, actual operational farm, offering food and beverage, caters to few people, self-harvesting, a value-added process in agriculture, handicraft making by tribes, presence of livestock, offering on-farm and off-farm activities, safe and hygienic place, basic medical facility, offering accommodation, preferring farm-grown food, and traditional farming techniques” were collected from past studies (Chu and Choi 2000; Dolcy 2015; Gao et al. 2014; Gharaei et al. 2012; Lu et al. 2014; Shah et al. 2020; Oh and Schuett 2010; Oh et al. 2007; Tew and Barbieri 2012) and as well as focus group discussion was made with resort managers and customers to finalize the variables. Variables were measured with a five-point scale ranging from not important (1) to extremely important (5). IBM SPSS statistics 28 version software was used to identify the underlying factors towards agri-tourism features.

27.4 Results and Discussion

27.4.1 General Characteristics of Respondents

Most of the respondents in this study belong to the female category (56.50%). On average, respondents were adults ($M = 33.64$) falls between 26 and 35 (45.75%) followed by the 36–45 age category (23.25%). More than half of the respondent's education qualifications were graduate level (60.50%) followed by post-graduate (30.25%).

In terms of occupation, 52.75% of respondents were employees followed by a housewife (23.00%), business people (9.50%), and students (14.75%). Overall respondents' income of 5–10 lakh (38.50%) was high, followed by 11–15 lakh (32.25%) and 16–20 lakh (18.50%).

27.4.2 Preferred Agri-tourism Services

Most of the customers visit agri-tourism sometimes (39.50%) followed by rarely (32.75%) and often (11.50%) as presented in Table 27.1.

The majority of customers preferred weekends (44.25%) as their preferred occasion, followed by vacation (30%) and seasonal festivals (13%).

Jose (2014) supported this result, stating that day trips and weekend travel are gaining popularity in India. Except for accessibility from metropolitan cities

Table 27.1 Customers preference toward agri-tourism features

Agri-tourism features	Number of customers ($N = 400$)	Percentage to total
<i>Agri-tourism experience</i>		
None	42	10.50
Rarely	131	32.75
Sometimes	158	39.50
Often	46	11.50
Always	23	5.75
<i>Preferred occasion</i>		
Weekend	177	44.25
Vacation	120	30.00
Seasonal festival	37	13.00
Family function	52	9.25
Business trip	14	3.50
<i>Agri-tourism location</i>		
Easily accessible from towns	115	28.75
Remote places	112	28.00
Famous tourist spots	110	27.50
Easily accessible from metropolitan cities	63	15.75
<i>Kind of eateries on the farm</i>		
Local and traditional food	178	44.50
Western food	68	17.00
Both	154	38.50
<i>Kind of service</i>		
Working farm, offering accommodation and food with active participation in farm activities	264	66.50
Working farm offering accommodation and food	102	25.50
Working farms only allow day trips with food (no accommodation)	34	8.50
<i>Kind of accommodation</i>		
Cottage	288	72.00
Dormitories	112	28.00

(15.75%), there was no major difference existed between locations such as accessibility from towns (28.75%), remote places (28%), and famous tourist spots (27.50%). Hence, the customers preferred mostly locations with easy accessibility from towns, remote places, and famous tourist spots. Preference for remote places showed that customers were seeking pleasure and a calm and natural environment.

27.4.3 Mean Value of Selected Variables

Almost the mean value shows that customers are most interested to see traditional farming techniques ($M = 4.33$) given in Table 27.2.

Table 27.2 Mean values of selected variables in agri-tourism

Variables	EI (%)	VM (%)	IM (%)	SI (%)	NI (%)	Mean ^a	SD
Nearby tourist spots	19.25	43.25	28.75	5.75	3.00	3.70	0.94
Natural surroundings	40.50	35.25	20.50	3.25	0.50	4.13	0.85
Agricultural landscape	41.25	25.5	28.75	04.25	0.25	4.03	0.94
Value for money	36.00	32.25	26.75	04.25	0.75	3.98	0.93
Venue accessibility	32.25	37.25	25.50	03.50	01.50	3.95	0.92
Actual operational farm	22.00	30.50	39.75	07.00	0.75	3.87	1.00
Offering food and beverage	24.75	41.50	27.00	5.00	1.75	3.66	0.92
Caters to few people	15.00	26.00	34.75	18.75	5.50	3.82	0.92
Self-harvesting	25.50	36.50	28.50	07.00	2.50	3.26	1.09
Agriculture value-added processes	33.25	34.75	23.00	08.00	01.00	3.75	0.99
Handicraft making by tribes	28.00	36.75	27.75	06.75	0.75	3.91	0.98
Presence of livestock	16.50	25.50	40.25	15.50	2.25	3.84	0.93
Offers on-farm activities	17.75	48.75	25.50	06.25	1.75	3.38	1.00
Offers off-farm activities	21.75	37.50	31.75	06.25	2.75	3.74	0.88
Safe and hygienic place	40.75	35.00	19.50	03.75	0.50	3.69	0.96
Basic medical facility	32.25	34.50	22.00	10.50	0.75	4.14	0.86
Offers accommodation	33.00	39.25	23.50	3.75	0.50	4.00	0.87
Prefer fresh food	39.00	40.25	16.75	03.50	0.50	4.13	0.85
Interested to see traditional farming techniques	53.25	31.00	12.25	03.00	0.50	4.33	0.84

^aMeasured with a five-point scale ranging from not important (1) to extremely important (5)
NI not important; *SI* somewhat important; *IM* important; *VM* very important; *EI* extremely important

Table 27.3 KMO and Bartlett's test

Test and adequacy	Values
<i>Kaiser–Meyer–Olkin measure</i>	
Sampling adequacy	0.884
<i>Bartlett's test of sphericity</i>	
Approx. chi-square	1759.322
df	171
Significant	0.000

The traditional farming technique consists of unique practices, and it varies with region. It was followed by basic medical facilities ($M = 4.14$), preferring farm-grown food ($M = 4.13$) and the presence of natural surroundings in an environment ($M = 4.13$).

27.4.4 *Principal Component Analysis of Agri-tourism Variables*

Principal Component Analysis (PCA) was employed to investigate grouping factors among listed variables. The correlation matrix table represents the matrix correlation between variables and most of the correlations are above 0.30; hence, factor analysis can be applied. There were no correlation coefficients above 0.50, which avoids multicollinearity or singularity between selected variables.

KMO table and Bartlett's test are also notified in Table 27.3.

Bartlett sphericity test $\chi^2 (171) = 1759.322$, whereas $p < 0.001$ shows that the correlation matrix is significantly different from the identity matrix and variables would not correlate. KMO index value = 0.884 represents that variable sets were suitable for carrying factor analysis.

27.4.4.1 **Scree Plot**

The scree plot is explained in Fig. 27.1.

A scree plot is like a bar chart of eigenvalues or the residual variance for enhancing the index. In this phenomenon, the scree plot shows a variance level of about 28.414% with the highest eigenvalue of 5.399. The number of factors that should be generated by the analysis can be determined by identifying the point at which the slope of the curve stops increasing and becomes more stable (referred to as the "elbow" point).

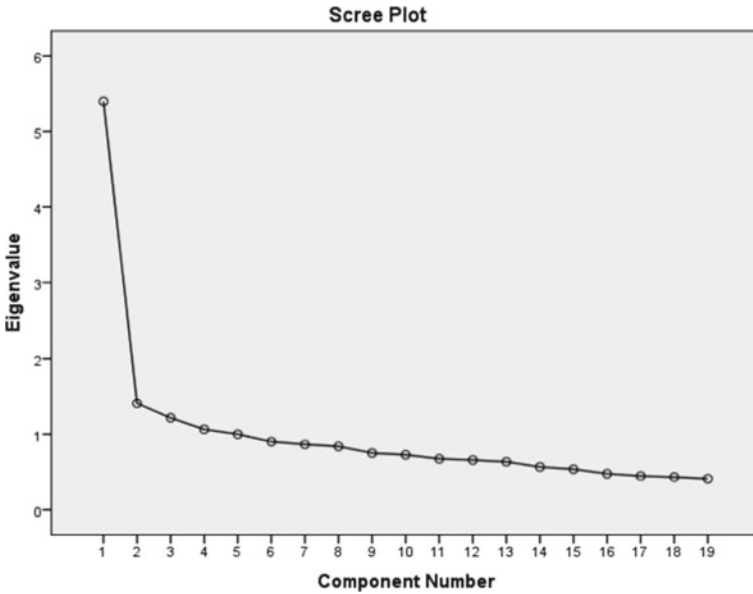


Fig. 27.1 Scree plot

27.4.4.2 Factors Underlying Agri-tourism Attributes

The principal component analysis extraction method and varimax rotation method, with Kaiser normalization, were applied and the outcomes are displayed in Table 27.4.

The cut-off size of factor loading which indicates the correlation between the observed measurements and the factors was set at 0.40, which was higher than 0.32 as recommended (Zehrer 2009).

The results in Table 27.4 indicate that principal component analysis gave five components with eigenvalues exceeding 1, explaining 28.41, 7.41, 6.40, 5.70, and 5.26% of the variance, respectively. Component 1 explained 13.84%, component 2 explained 12.82%, component 3 explained 9.90%, component 4 explained 8.70%, and component 5 explained 7.89% of the variance in rotation sums of squared loadings. The total variance explained (53.15%) does not change after rotation, just how it was distributed between the five components.

The five arrived agri-tourism selection factors were farm landscape, farm activities, farm attractions, farm services, and farm experience.

The first component—farm Landscape: Under the factor farm landscape, the natural surroundings, venue accessibility, basic facility, value-added process and units, safe and hygienic place, and showing traditional farming techniques items were included. Past studies also revealed that customers preferred agri-tourism features that included natural surroundings, diversified plant crops and water resources in agri-tourism (Gao

Table 27.4 Factors underlying agri-tourism attributes

Variables	Components				
	Farm landscape	Farm activities	Farm attractions	Farm service	Farm experience
Natural surroundings	0.677				
Safe and hygienic place	0.620				
Basic facilities	0.618				
Traditional farming	0.575				
Venue accessibility	0.546				
Value-added process and units	0.483				
On-farm activities		0.807			
Off-farm activities		0.722			
Offer farm-grown food		0.492			
Handicrafts		0.447			
Nearby tourist spots			0.781		
Value for money			0.509		
Offering food and beverage			0.448		
Self-harvesting			0.424		
Actual operational farm				0.800	
Farm guides and staff				0.519	
Offers accommodation				0.452	
Cater to a few people					0.743
Presence of livestock					0.609
<i>Eigenvalue</i>	5.399	1.408	1.217	1.065	1.000
<i>Percentage of variance</i>	28.414	7.411	6.404	5.605	5.266
<i>Cumulative percentage</i>	28.414	35.825	42.229	47.834	53.099

Extraction Method: Principal Component Analysis
 Rotation Method: Varimax with Kaiser Normalization

et al. 2014). Many customers preferred to travel short distances to reach the venue (Melstrom and Murphy 2018).

The second component—farm activities: This factor consisted of four items: handicrafts made by tribes, on-farm activities such as farming and agricultural production practices, and off-farm activities that occur beyond the farm (visiting rural markets, tractor rides, bullock cart rides, swimming in a farm pond, trails) and offering farm-grown food. Bullock cart rides, farm tours, fishing in a farm pond, trekking, tractor ride, and farm visit were some of the desired activities in agri-tourism (Barbieri et al. 2016).

The third component—farm attractions: The third factor explained the farm attractions in which nearby tourist spots, value for money, offering local food and beverages, and self-harvesting (customers interested in picking desired fruits, flowers, and vegetables) were obtained. Value for money was an essential aspect for tourists and local food items have important cultural roots in the community and strengthen the value of local people (Tregear et al. 2007).

Fourth component—farm service: This factor included three items: farm services covering farm guides and staff, operational farm with crop cultivation practices, and engaging accommodation for customers. Past studies on accommodation choice highlight hygiene and safety as important features (Oh and Schuett 2010).

Fifth component—farm experience: Finally, the farm experience factor includes catering to a few people (allowing only a few customers and their desire for privacy on the farm) and livestock experience as items. Authentic farm experience can be experienced through day-to-day farm operations and also through farm entrepreneurial diversification strategy (Barbieri and Mshenga 2008).

Principal component analysis showed the underlying factors towards agri-tourism features were farm landscape, farm activities, farm attractions, farm service, and farm experience.

27.5 Conclusion

This study assessed agri-tourism demand in Tamil Nadu based on the customer's perspective. Many customers preferred the weekend (44.25%) as a suitable occasion for going agri-tourism. Customers selected working farms and offered accommodation and food with active participation in farm tasks (73.95%) as the preferred service in agri-tourism. The mean value confirms that customers are interested to know about traditional farming techniques ($M = 4.33$). The traditional farming technique consists of exclusive practices, and it differs with the region. It was followed by basic medical facilities ($M = 4.14$), preferring farm-grown food ($M = 4.13$) and the presence of natural surroundings in an environment ($M = 4.13$).

Among grouped factors, farm landscape has the highest variance among the remaining factors. Under the farm landscape factors, natural surroundings, venue

accessibility, medical facility, the value-added process in agriculture, safe and hygienic place, and traditional farming techniques were the grouped variables. Engaging these customer-preferred features in agri-tourism would lead to adding value for farm resorts and as well as agri-tourism providers.

Managerial Implications

To attract more male customers, farm resorts have to include more gender-oriented features. Including a variety of farm implements collection will also enhance the male customer's visit. To enrich the customer's experience, farm resort owners should employ ongoing customer relationship management to increase their loyalty and repeat visits. The weekend is the available occasion for every customer and based on that, farm resort owners have to develop a plan and as well as to offer packages in agri-tourism. Traditional farming techniques were one of the most influencing variables. Including more region-oriented traditional farming practices will influence more interest in agri-tourism. Farm resorts have to include more natural features in landscape surroundings to attract more customers. In the same, they have to plant more native plants and flowers. In parallel, the farm resorts have to concentrate on safety and hygiene measures for retaining the customer's value.

Limitations and Future Research

The study is based on primary data collected from a sample of customers visiting selected farm resorts, with Coimbatore chosen as the research area. However, it should be noted that agri-tourism in other countries or regions may have different characteristics, and future studies can refer to the findings of this study in other areas. To further examine the generalizability of the model, future studies should also focus on different types of tourists, such as domestic and foreign, rural and urban, or package tourists and independent travelers, as each group may have different expectations and motivations. This study focused on agri-tourism activities, but other variables such as local festivals, and sightings of wind turbines in agri-tourism, may also influence customer intention to visit agri-tourism and can be studied. Additionally, this study focused only on preferences of features commonly found or inherent to agriculture such as harvesting, sowing, and farm animals. However, non-agricultural features such as cock fighting, bullock cart races, and bull chasing, which impact agri-tourism can also be studied. Additionally, a comparative analysis from the agri-tourism provider's perspective could provide a better understanding of the future scope and opportunities for agri-tourism in Tamil Nadu as agri-tourism providers and others have challenges in the agriculture sector in designing their products and services to match customer expectations.

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Chapter 28

An Investigation of the Relationship Among the Public Healthcare Service Quality, Patient Satisfaction and Behavioral Intention of Inpatients: Collective and Independent Structural Models for Urban and Rural India



Hiren Patel and Rupal Khambhati

28.1 Introduction

The key to success for the service industries is a high-quality service. Additionally, the manufacturing sector, also, experiences a high impact of quality improvement on customer satisfaction which leads to behavioral intention (Oliver 1980; Meesala and Paul 2018). Healthcare service standard measurement finds indolent in status with greater incentives for a closely tied market economy for the country like the USA, against the nation-wide adopted federal healthcare system for the countries like Canada, Sweden, Japan and England. Under the prevailing customary cross-national difference in healthcare delivery and quality measurements across the globe, an investigation among the relationship of service quality for public health care, patient satisfaction and behavioral intention of the patients is called for.

In the light of above different models of public healthcare system, the federal government of India, being the public healthcare system organiser of the second largest populated country, is demanded even greater focus on high standard of the services for the critical service such as health care. India has got a largely functional universal healthcare system, which run by states and the union government but confined to 37% only. The global average in the number of physicians is followed in India. However, 74% of its doctors catering to a third of the urban population and

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rural India portrays even frightening picture with 81% deficiency of specialists for rural community health centers (Firstpost-KPMG report 2018).

Service quality is not only identified as a exclusive construct, but also is perceived as a customer's subjective interpretation of his or her experience and service quality is conceptualized and measured as an attitude (Marley et al. 2004; Zeithaml et al. 1996). Attempts are made to measure services' quality in Das et al., Meesala and Paul (2018), Mekoth et al. (2012), Narang, Sequist et al. (2011), Sharma and Narang (2011), Srivastava and Shainesh (2015) and around (Ahmed et al. 2017; Akter et al. 2013; Lupo 2016; Mosadeghrad 2014; Rezaei et al. 2016; Shabbir et al. 2016) India. Versatility of usage of SERVQUAL model in different service settings indicates a need for modification in scale in different service contexts (Banwet and Datta 2002; Cunningham et al. 2002; Khambhati et al. 2019; Zhao 2003) in absence of generalizability of standard scale.

With the view to extended the above, the present study has fourfold objective; to construct Public HealthCare Service Quality (PubHCServQual) model, a modified SERVQUAL for measurement of service quality for public healthcare facilities; to validate PubHCServQual scale; to investigate the relationship and to structure the relationship among service quality, patient satisfaction and behavioral intention for collective and independent responses from urban and rural India. The study concludes with three structural models; Collective Model (CM), Independent Urban Model (IUM) and Independent Rural Model (IRM).

28.2 Literature Review and Conceptual Framework

Service quality has been one of the highly explored topic in service marketing. The SERVQUAL model framework has been applied to several areas; airline services (Ghorabae et al. 2017; Li et al. 2017), banking (Ali and Raza 2017; Kashif et al. 2016; Paul et al. 2016), higher education (Garcia et al. 2018; Noaman et al. 2017; Weerasinghe and Fernando 2018), hospitality and tourism (Akama and Kieti 2003; Chang 2009; Nadji et al. 2018; Nadiri and Hussein 2005; Parasuraman et al. 1985; Pongsiri 2012; Ryu et al. 2012), hotel (Armstrong et al. 1997; Akbaba 2006; Chu and Choi 2000; Ingram and Daskalais 1999; Ladhari 2009; Ramsaran-Fowdar 2007; Ren et al. 2016; Tsang and Qu 2000), retail (Liu et al. 2017; To et al. 2013) and health care (Aagja and Garg 2010; Ahmed et al. 2017; Behdioglu et al. 2017; Fatima et al. 2017; Ghahramanian et al. 2017; Izadi et al. 2017; Jakupovic et al. 2018; Kim 2018; Kim et al. 2017; Lee 2017; Meesala and Paul 2018; Moura et al. 2017; Owusu et al. 2017; Rafidah et al. 2017). The literature on service quality outlined two major constructs: technical dimensions (the core services provided) and functional dimensions (how the services are provided) (Parasuraman et al. 1988). A typical service quality measurement for healthcare industry is divided into technical service quality measures and functions service quality measures. In the case of the healthcare sector, actual understanding about the technical dimensions is not expected universally. In case of measurement of technical dimensions of healthcare services, patients face

two major issues, despite the outcomes being relatively concrete; a significant time lag between the provision of health care and recognition of its outcome and lack of sufficient expertise and skills to evaluate whether the delivered healthcare service was necessary. As a result, the patients greatly rely on non-technical process-related dimensions and functional measures which are, usually, the primary determinant of patients' perceptions about the quality of healthcare services (Donabedian 1980). The functional dimensions, therefore, are considered for the present study. Earlier studies recognized the healthcare service quality scale varied from three to eleven constructs (Aagja and Garg 2010; Aliman and Mohamad 2016; Chahal and Kumari 2010; Choi et al. 2004; Cunningham 1991; Helena Vinagre and Neves 2008; Hussain et al. 2016; Jun et al. 1988; Kilbourne et al. 2004; Kumaraswamy 2012; Ovretveit 2000; Padma et al. 2010; Saad Andaleeb 1998; Shabbir et al. 2016; Shaikh et al. 2008) which leads the present study to hypothesize multidimensionality of public healthcare service quality.

Hypothesis 1: Service Quality Is Measured Through Multi-item Scale

Distinction in functional definitions of satisfaction and service quality leads to relationships among them in the literature of marketing (Choi et al. 2004; Meesala and Paul 2018). However, the lack of clarity in the definitions of satisfaction and service quality leads to the ongoing controversy surrounding the causal order of them. The service quality signifies a cognitive judgment, whereas satisfaction is an affect-laden evaluation of customer experiences (Cronin and Taylor 1994; Dagger et al. 2007; Meesala and Paul 2018; Oliver 1993; Tse and Wilton 1988); therefore, service quality is considered as antecedent to patient satisfaction.

Hypothesis 2: Service Quality Influences Patient Satisfaction

Numerous studies have recognized that the service quality directs behavioral intentions and establishes a significant link between them (Boulding et al. 1993; Hooper et al. 2013; Salazar et al. 2010; Zeithaml et al. 1996) and more pieces of evidence are collected for the field of health care (Choi et al. 2004; Mahendrayana et al. 2018; Mitropoulos et al. 2018). In the field of consumer behavior, several studies have instituted behavioral intention as an action-oriented construct and the theory of cognitive behavior (Bandura 1989; Bandura and Walters 1977), therefore, guides the study to hypothesize satisfaction as an antecedent to behavior.

Hypothesis 3: Service Quality Influences Behavioral Intention

Saha and Theingi (2009) explained the relationship between satisfaction and behavioral intention and concluded that satisfaction positively influences behavioral intention for Airlines industry in Thailand. Amin and Zahora (2013) stated a significant relationship of patients' satisfaction with behavioral intention for hospitals. These studies direct the researchers to hypothesize an influence of patient satisfaction on behavioral intention.

Hypothesis 4: Patient Satisfaction Affects Behavioral Intention

However, these studies lack either Indian context (Ahmed et al. 2017; Amin and Zahora 2013; Fatima et al. 2017; Izadi et al. 2017; Lee 2017; Moura et al. 2017; Owusu et al. 2017; Rafidah et al. 2017; Zaid et al. 2020) or construction of industry-specific scale (Alomari 2021; Ghahramanian et al. 2017; Meesala and Paul 2018; Saha and Theingi 2009; Umoke et al. 2020; Vanichchinchai 2022) or investigation of linkage between service quality scale and affect-laden and/or action-oriented constructs (Aagja and Garg 2010; Lee 2017; Behdioglu et al. 2017; Fatima et al. 2017; Ghahramanian et al. 2017; Izadi et al. 2017; Jakupovic et al. 2018; Padma et al. 2010) or survey from patients admitted to hospital (Behdioglu et al. 2017; Chahal and Kumari 2010) or application of industry specific scale linked to affect-laden and/or action-oriented constructs (Kim et al. 2017; Meesala and Paul 2018; Owusu et al. 2017), recognize the research gap and motivate for further study (Figs. 28.1 and 28.2).

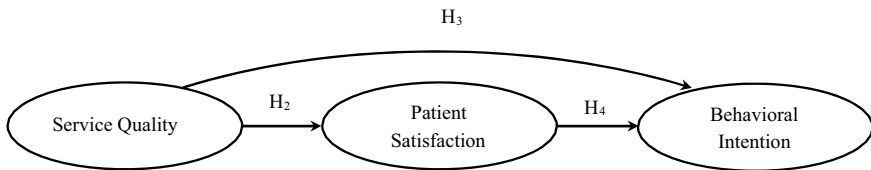


Fig. 28.1 Conceptual model

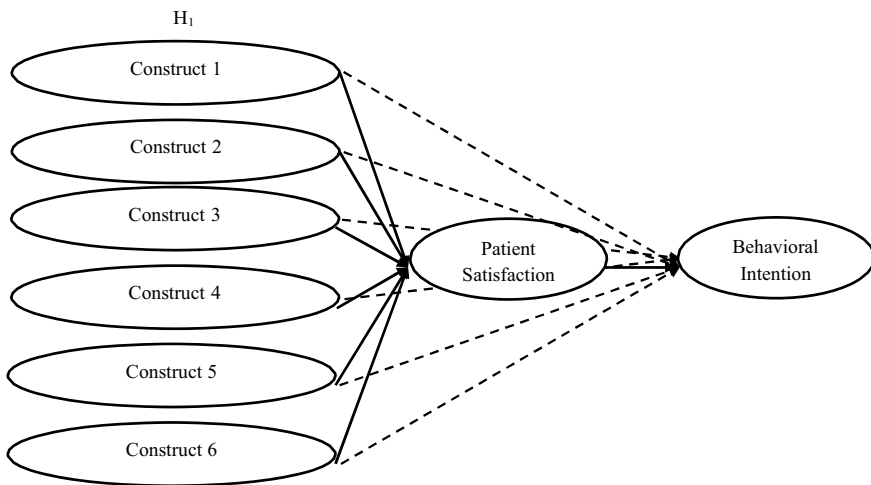


Fig. 28.2 Theoretical model

Theoretical relationship among Public HealthCare Service Quality (PubHC-ServQual), inpatient satisfaction and behavioral intention is modeled, measured and validated employing three structural measurement models; Collective Model, Independent Urban Model and Independent Rural Model in Indian context.

28.3 Research Methodology

To construct PubHCServQual scale, a comprehensive list of 24 items is prepared for semi-structured feedback from industry and academic experts. After pilot survey of 77 respondents, modified questionnaire, with 22 items for service quality measurement, four items for patient satisfaction measurement and three items for behavioral intention measurement, is circulated to 1090 (510—urban and 580—rural) respondents from Gujarat, India, conveniently selected inpatient respondents, who have spent at least one night at the healthcare facility and evaluated by 933 (501—urban and 432—rural) respondents. After deleting 23 erroneous responses, 910 (495—urban and 415—rural) valid responses are considered; splitted as 450 (249—urban and 201—rural) responses for scale construction and 460 (246—urban and 214—rural) for scale validation. Multidimensionality of the scale was tested through an exploratory factor analysis with principle component analysis method and orthogonal, varimax, rotation which resulted into 19-item optimum alternative factor solution after removing three items with low factor loadings. A single-factor solution with only eight of the 19 original items was discarded to cover multidimensional structure. Other terminal solutions were also explored but discarded for either containing too many double loadings (suggesting non-discrimination between constructs) or for factor loading less than 0.500 (Hair et al. 2015). The 19 items' scale was validated for; *Face validity* using expert opinion (two healthcare experts and two academicians), *Content validity* through literature review and *Construct validity* (Hair et al. 2015; O'Leary-Kelly and Vokurka 1998); *convergent validity* based on factor loadings and Average Variance Extracted (AVE) and *discriminant validity* (Holmes-Smith 2001; Harvey et al. 1989) comparing paired square correlation estimates with average AVE. Reliability of the scale is assessed using the split-half technique—test—retest factor loadings and comparative coefficient alpha scores with 460 (246—urban and 214—rural) responses. *Reliability* of collection of heterogeneous but similar six constructs is calculated with composite reliability measure.

The goodness-of-fit assessment confirms the construct validity for PubHC-ServQual scale. The basic *goodness-of-fit* is estimated through Chi-square value, degree of freedom, statistical significance value and *construct validity* applying absolute fit measures (goodness-of-fit Index and Root Mean Square Error of Approximation estimate), incremental fit measures (Normed Fit Index, Comparative Fit Index, Tucker-Lewis Index and Incremental Fit Index), and parsimony fit measures (Adjusted goodness-of-fit Index).

Hypothesis no.	Hypothesis statement	Status after research		
		CM	IUM	IRM
Hypothesis 1	Service quality is measured through multi-item scale	Six constructs are identified, validated, confirmed and termed as: medical services, service responsiveness, discharge, admission, hygiene and visual facility		
Hypothesis 2	Service quality influences patient satisfaction	Medical services, service responsiveness and hygiene only contributes significantly	Service responsiveness, admission and visual facility only contributes significantly	Only medical services contributes significantly
Hypothesis 3	Service quality influences behavioral intention	No service quality constructs found significantly impacting behavioral intention		
Hypothesis 4	Patient satisfaction affects behavioral intention	Positive significant impact of patient satisfaction is found on behavioral intention		

The assumed theoretical model is measured for the fitness using The basic *goodness-of-fit* is estimated through Chi-square value, degree of freedom, statistical significance value and *construct validity* applying absolute fit measures mentioned above.

28.4 Results and Discussion

The assessment of multi-factorization begins with the assessment of adequacy of the sample, and using highest KMO value of 0.756, along with the significance of Bartlett’s test of sample adequacy, sample is found adequate. After having an assessment for low loading, cross-loading and freestanding, the cleanest factor structure with 19 items, six constructs (refer Fig. 28.2, H1); Medical Service, Service Responsiveness, Discharge, Admission, Hygiene and Visual Facility, is explored for measurement of service quality for all three models (Table 28.1).

Discussion for Urban (IUM) and Rural (IRM) Models

The assessment of multi-factorization results into KMO value of 0.743 and 0.733 for IUM and IRM, respectively, confirming sample adequacy for factor analysis. Under testing of construct validity through convergent, factor loadings for Visual Facility is found to breach threshold limit of 0.450 (Hair et al. 2015), for IUM, while for IRM,

Table 28.1 Sample adequacy assessment

	CM	IUM	IRM
KMO value	0.756	0.743	0.733
Chi-square	2456.342	1596.948	1044.720
Degree of freedom	171	171	171
Significant value	0.000	0.000	0.000

factor loadings for each factor are within threshold limit. On composite reliability score, only Hygiene and Visual Facility scores are lower than acceptable limit of 0.700 (Hair et al. 2015) for both IUM and IRM models (refer Tables 28.2, 28.3 and 28.4).

Test–retest factor loadings search precautions taken to prevent hospital-acquired infection, Visually attractive and comfortable facilities and Clean wards as items contravening the reliability (on the basis of factor loadings) for IRM, while all the items of IUM account for test–retest reliability (refer Tables 28.2, 28.3 and 28.4).

Visual facility is evaluated to have lower values of coefficient alpha (Cronbach 1951) estimates for both IUM and IRM models (refer Table 28.5).

A pair of *Hygiene* and *Visual Facility* violates discriminant validity with a larger value of squared correlation estimate as compared to average paired AVE for IRM, while all the pairs of constructs confirm discriminant validity (refer Table 28.6).

Confirmation of six-factor model has Chi-square goodness-of-fit value ranging from 201.966 and 298.740 for IUM and IRM models, respectively. Also, for IUM and IRM models, Chi-square to degree of freedom value is less than the valid limit of 5.000 along with the significance value less than 0.001 indicate basic fit. Higher value of GFI (above threshold limit of 0.900) and lower value of RMSEA (lower than 0.10) in case of both IUM and IRM models also reflect good absolute fit along with higher value of CFI (more than acceptable limit of 0.900) which specifies reasonable incremental fit. For IUM model, parsimony fit value is less than the acceptable limit, while IRM indicates good parsimony fit (refer Table 28.7).

IUM indicates that Service Responsiveness, Admission and Visual Facility are significantly negatively impacting patient satisfaction. IRM signifies negative impact of Medical Services on patient satisfaction. Additionally, both IUM and IRM models furnish strong positive significant impact of patient satisfaction on behavioral intention (refer Table 28.8).

Discussion for Collective (CM) Model

The assessment of multi-factorization results into KMO value of 0.745 confirming sample adequacy for factor analysis. Under testing of construct validity through convergent, factor loadings for Discharge and Visual Facility are found to breach threshold limit of 0.450 (Hair et al. 2015) for CM. Test–retest factor loadings search precautions taken to prevent hospital-acquired infection and Visually attractive and

Table 28.2 Comparative factor loadings (test–retest reliability), convergent validity (avg. AVE) and composite reliability (*t* value)—CM

Statements/constructs	SC	SV	Avg. AVE	<i>t</i> value
<i>Medical services</i>			0.530	0.814
V4	0.904	0.864		
V5	0.886	0.841		
V3	0.872	0.711		
V6	0.842	0.638		
<i>Service responsiveness</i>			0.546	0.857
V17	0.782	0.837		
V18	0.771	0.827		
V11	0.762	0.684		
V12	0.758	0.704		
V10	0.721	0.649		
<i>Discharge</i>			0.441	0.753
V14	0.807	0.857		
V15	0.767	0.804		
V13	0.683	0.710		
V16	0.681	0.719		
<i>Admission</i>			1.200	1.120
V2	0.855	0.902		
V1	0.838	0.895		
<i>Hygiene</i>			0.496	0.663
V9.1	0.842	0.781		
V9.2	0.813	0.815		
<i>Visual facility</i>			0.394	0.563
V7	0.755	0.759		
V8	0.745	0.574		

comfortable facilities as items contravening the reliability on the basis of factor loadings (refer Tables 28.2, 28.3 and 28.4). Estimated coefficient alpha value is lower than acceptable limit for Visual Facility (refer Table 28.5).

A pair of *Hygiene* and *Visual Facility* violates discriminant validity with a larger value of squared correlation estimate as compared to average paired AVE, while all the pairs of constructs confirm discriminant validity (refer Table 28.6).

Confirmation of six-factor model has Chi-square goodness-of-fit value of 251.907 with Chi-Square to degree of freedom value less than the valid limit of 5.000 and the significance value less than 0.001 indicates basic fit. Higher value of GFI (above threshold limit of 0.900) and lower value of RMSEA (lower than 0.10) reflects good absolute fit along with higher value of CFI (more than acceptable limit of 0.900)

Table 28.3 Comparative factor loadings (test–retest reliability), convergent validity (avg. AVE) and composite reliability (*t* value)—IUM

Statements/constructs	SC	SV	Avg. AVE	<i>t</i> value
<i>Medical services</i>			0.579	0.844
V4	0.868	0.859		
V5	0.838	0.845		
V3	0.752	0.779		
V6	0.748	0.747		
<i>Service responsiveness</i>			0.476	0.819
V17	0.850	0.804		
V18	0.810	0.782		
V11	0.577	0.686		
V12	0.587	0.677		
V10	0.559	0.660		
<i>Discharge</i>			0.506	0.799
V14	0.880	0.819		
V15	0.738	0.734		
V13	0.742	0.670		
V16	0.864	0.805		
<i>Admission</i>			0.639	0.764
V2	0.903	0.848		
V1	0.887	0.823		
<i>Hygiene</i>			0.524	0.688
V9.1	0.801	0.804		
V9.2	0.879	0.827		
<i>Visual facility</i>			0.356	0.519
V7	0.719	0.824		
V8	0.634	0.661		

which specifies reasonable incremental fit. Parsimony fit creates issue with value less than the acceptable limit (refer Table 28.7).

Medical Service, Service Responsiveness and Hygiene are significantly negatively impacting patient satisfaction. Additionally, CM model furnishes strong positive significant impact of patient satisfaction on behavioral intention (refer Table 28.8).

Table 28.4 Comparative factor loadings (test–retest reliability), convergent validity (avg. AVE) and composite reliability (*t* value)—IRM

Statements/constructs	SC	SV	Avg. AVE	<i>t</i> value
<i>Medical services</i>			0.475	0.773
V4	0.860	0.798		
V5	0.803	0.848		
V3	0.757	0.720		
V6	0.601	0.718		
<i>Service responsiveness</i>			0.615	0.888
V17	0.739	0.820		
V18	0.736	0.852		
V11	0.821	0.785		
V12	0.816	0.777		
V10	0.751	0.784		
<i>Discharge</i>			0.507	0.725
V14	0.757	0.774		
V15	0.685	0.645		
V13	0.651	0.655		
V16	0.657	0.755		
<i>Admission</i>			0.778	0.867
V2	0.840	0.883		
V1	0.861	0.859		
<i>Hygiene</i>			0.476	0.644
V9.1	0.813	0.805		
V9.2	0.826	0.661		
<i>Visual facility</i>			0.459	0.627
V7	0.660	0.660		
V8	0.692	0.566		

Table 28.5 Comparative coefficient alpha scores

Constructs	CM		IUM		IRM	
	SC	SV	SC	SV	SC	SV
Medical service	0.895	0.757	0.807	0.824	0.848	0.887
Service responsiveness	0.830	0.852	0.800	0.811	0.736	0.771
Discharge	0.721	0.778	0.826	0.762	0.637	0.686
Admission	0.621	0.769	0.797	0.627	0.669	0.600
Hygiene	0.639	0.677	0.734	0.690	0.644	0.701
Visual facility	0.388	0.504	0.413	0.529	0.538	0.374

Table 28.6 Discriminant validity assessment

Pairs of constructs	CM			IUM			IRM		
	Corr. Esti.	Avg. AVE	Sq. Corr.	Corr. Esti.	Avg. AVE	Sq. Corr.	Corr. Esti.	Avg. AVE	Sq. Corr.
MS–SR	–	0.545	0.0015	–	0.531	0.0004	–	0.555	0.0034
MS–Dis	–	0.486	0.0000	– 0.126	0.543	0.0158	0.101	0.441	0.0102
MS–Adm	0.022	0.867	0.0004	0.042	0.609	0.0017	– 0.112	0.627	0.1250
MS–Hyg	–	0.513	0.0000	0.010	0.552	0.0001	– 0.030	0.475	0.0009
MS–VF	–	0.462	0.0005	0.016	0.467	0.0002	– 0.116	0.467	0.0134
SR–Dis	0.053	0.500	0.0028	0.060	0.494	0.0036	0.068	0.521	0.0046
SR–Adm	0.007	0.881	0.0000	– 0.013	0.561	0.0002	– 0.011	0.701	0.0001
SR–Hyg	0.059	0.528	0.0035	0.531	0.503	0.2820	0.692	0.555	0.4789
SR–VF	0.619	0.476	0.3832	0.464	0.419	0.2153	0.736	0.547	0.5417
Dis–Adm	–	0.822	0.0000	0.020	0.573	0.0004	– 0.091	0.593	0.0082
Dis–Hyg	–	0.469	0.0007	– 0.027	0.515	0.0007	– 0.048	0.441	0.0023
Dis–VF	–	0.417	0.0022	0.010	0.431	0.0001	– 0.163	0.433	0.0265
Adm–Hyg	–	0.850	0.0001	– 0.020	0.582	0.0004	– 0.094	0.627	0.0088
Adm–VF	–	0.798	0.0031	– 0.141	0.498	0.0198	– 0.051	0.618	0.0026
Hyg–VF	0.706	0.445	0.4984	0.515	0.440	0.2652	0.889	0.467	0.7903

Table 28.7 Confirmatory model fit indices

Fit indices	CM	IUM	IRM
Chi-square (min)	251.907	201.966	298.740
Degrees of freedom	137	137	137
CMIN/DF	1.839	1.474	2.181
GFI	0.905	0.912	0.936
AGFI	0.868	0.878	0.911
CFI	0.920	0.952	0.941
NFI	0.844	0.869	0.898
RMSEA	0.059	0.048	0.051
TLI	0.901	0.941	0.927
IFI	0.922	0.954	0.942
<i>p</i> value	0.000	0.000	0.000

Table 28.8 Measurement model (estimates and model fit indices)

Regression estimates	CM			IUM			IRM		
	Std. Reg. Weigh	CR	Prob.	Std. Reg. Weigh	CR	Prob.	Std. Reg. Weigh	CR	Prob.
Sat-MS	- 0.134	- 2.732	0.006*	- 0.101	- 1.531	0.126	- 0.167	- 1.687	0.092*
Sat-SR	- 0.168	- 2.187	0.029*	- 0.230	- 2.181	0.029*	- 0.048	- 0.130	0.897
Sat-Dis	0.017	- 0.337	0.736	- 0.069	- 0.993	0.321	- 0.015	- 0.084	0.933
Sat-Adm	0.024	0.378	0.705	- 0.143	- 1.866	0.062*	0.015	0.066	0.947
Sat-Hyg	- 0.031	- 2.774	0.006*	- 0.020	- 0.185	0.853	- 0.404	- 0.590	0.555
Sat-VF	0.059	0.485	0.628	- 0.250	- 1.960	0.050*	0.493	0.494	0.621
BI-Sat	0.985	34.549	0.000*	0.985	22.535	0.000*	1.004	20.102	0.000*
<i>Model fit indices</i>									
Chi-square (min)		815.906			481.661			411.094	
Degrees of freedom		277			275			274	
CMIN/DF		2.946			1.751			1.500	
GFI		0.870			0.871			0.869	
AGFI		0.835			0.835			0.832	
CFI		0.922			0.936			0.965	
NFI		0.887			0.865			0.892	
RMSEA		0.065			0.055			0.048	
TLI		0.908			0.925			0.954	
IFI		0.922			0.937			0.961	
p value		0.000			0.000			0.000	

* denotes $p \leq .05$

28.5 Conclusions and Managerial Implications

In the Indian context, healthcare service quality is a multidimensional measurement scale with six constructs; Medical Services, Service Responsiveness, Admission, Discharge, Hygiene and Visual Facility. Patient satisfaction, for urban health care, is impacted by Service Responsiveness, Admission and Visual Facility, while for rural health care, Medical Service creates an impact on patient satisfaction. For collective responses, Medical Service, Service Responsiveness and Hygiene produce an impact on patient satisfaction. Additionally, patient satisfaction positively leads to favorable behavioral intention for urban, rural and collective responses.

Hygiene and Visual Facility are constructs of concern for the public healthcare managers, and their management can sharpen the edge of service quality and ultimately satisfaction. The management of urban public healthcare system must concentrate on Service Responsiveness, Admission and Visual Facility as it has significant

impact on patient satisfaction, while Medical Services must be point of focus for rural public healthcare facilitators. Combine responses for urban and rural India indicates that the public healthcare facilitators must target Medical Services, Service Responsiveness and Hygiene to improve upon the patient satisfaction. However, the models do not support any direct impact of constructs of service quality on behavioral intention. Patient satisfaction leads positively to the behavioral intention toward public healthcare sector for both urban and rural India. Any improvement or degradation in patient satisfaction advances the replicating effect toward behavioral intention and patients react to it in line with the effect of change in patient satisfaction.

28.6 Limitations and Future Research Directions

The present study has two-fold limitations; Consideration of only Indian context and exclusion of private and trust managed healthcare facilities. Additionally, control for demographic factors of respondents is beyond the scope of the present study.

The future researchers may explore global context of the present study by considering distinctiveness of the healthcare systems. Further, the study can be extended by considering the responses for private and trust managed healthcare facilities.

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Chapter 29

Focus on Social and Sustainability Goals: The Blurring Line Between a Commercial Enterprise and a For-Profit Social Enterprise



Sanjeev Pathak, Arun Kumar Tripathy, and Abinash Panda

29.1 Introduction

The rise of the capitalistic model in the latter part of the twentieth century led organizations to focus more on profit maximization and increasing shareholder wealth. Friedman (1970) argued that the sole purpose of an enterprise is to make a profit, and their social responsibility is met by paying the tax to Government. Agency theory (Jensen and Meckling 1976) also argued for aligning executives' interests with shareholders to reduce agency costs, thereby increasing the focus on shareholder wealth maximization rather than sustainable value creation. Some of the consequences of the shift in the firm's focus to shareholder profit maximization have created misplaced and ill-advised incentives for the executives, mistrust about companies and executives in society (Martin 2011), more products and services were created for the affluent class (for higher profitability), and thus, the need of more significant segment of society and environment was ignored—leading to reduced legitimacy of commercial enterprises. In their seminal work, Porter and Kramer (2011) asserted the need for shared value creation by firms with a focus on creating value over both economic and social costs. United Nations (2015) developed the seventeen sustainable development goals and recommended more significant attention to social, environmental, and sustainability goals. United Nations guidelines forced various governments to develop policies and regulatory norms to solve some of these social and sustainability

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problems. It has also resulted in increased corporate social responsibility (CSR) activities. These changes further encouraged commercial enterprises to include social and sustainability goals in their strategy—beyond the CSR activities. Companies like HP, Illumina, Whirlpool, Intel, Qualcomm, Microsoft, and Cisco have set a very high standard in achieving sustainability goals (<https://www.newsweek.com/americas-most-responsible-companies-2022>). Is this shift in the focus of commercial enterprises toward social and sustainability goals driven by compliance or their efforts to improve legitimacy?

Despite spending by the Government and efforts by non-profit social sector (NGO) players, the needs of the marginalized population that constitutes the bottom of the pyramid (Prahalad 2004) need to be adequately addressed (UN Report 2015). Developing countries like India have a significant population living in poverty that does not have access to basic needs like healthcare and quality education. In 2015 the UN created seventeen sustainable development goals (SDGs) to make the world a better place, specifically improving the living condition of the bottom of the pyramid population. Eleven goals out of these seventeen SDGs were related to meeting the basic need of society like education, health, poverty, clean water, climate, and clean energy. UN has emphasized that social enterprise development is crucial to make an enormous social impact and generating financial returns (UN Report 2015). The past literature defines three forms of social enterprises, non-profit, for-profit, and hybrid (Doherty et al. 2014). Non-profit social enterprises face difficulties securing funds and donations to continue or scale up their social initiatives. In recent times issues of governance and corruption have cropped up related to this type of organizations (Mason 2010). Therefore, the non-profit model of social enterprise is not effective in addressing the larger social issues. NGOs' ineffectiveness in meeting social needs has increased attention to a more sustainable model of the social enterprise known as for-profit social enterprise (FPSE). Dees and Anderson (2003) defined *For-profit social enterprise* as an entrepreneurial organization to make a social impact while making a profit. Given the financial self-sufficiency of FPSE, its primary objective is to create social value along with economic value to have financial self-sufficiency for continued growth in social impact. As the FPSE form of the social enterprise seems more effective and sustainable, we selected the for-profit form for our study.

Davis (1973) said that every commercial enterprise creates some form of social value in the form of employment and launching a new product that meets a societal need. Then why do we need a separate form of an enterprise? If yes, then is this form a sustainable form of enterprise? These questions have some explanation from for-profit social enterprises. FPSE shares similarities with commercial enterprises as both create economic value and may have a similar cost structure (Dacin et al. 2010). FPSE may have differences from commercial enterprises in terms of motives, social value creation, priorities, and business models (Peredo and Mclean 2006), Stevens et al. (2015). When an FPSE works toward building more economic value, do they start behaving like a commercial enterprise? Some of the practices of the microfinance institutions have started to mirror that of commercial banks, like checking the credit history of poor loan borrowers. Dacin et al. (2010) suggested that

social enterprise does not need a different theory, and it can be explained by conventional entrepreneurship within a different context which addresses the distinctive opportunity.

Therefore, the growing trend of inclusion of social and sustainability goals in the firm-level strategy of a commercial organization is creating an institutional logic like for-profit social enterprise focused on social goals. The social and economic goals of both these types of organizations are similar to each other. Therefore, the operational similarity between these types of organizations is increasing. This paper explores the extent to which these similarities and differences between a commercial enterprise and FPSE can be justified. We have examined the phenomenon with integrated theoretical lenses of institutional theory (Scott 2013) and resource-based theory (Barney 1991; Barney et al. 2001). The intent is to explain the similarities between both these forms of organization. Moving forward, do we expect both types of organizations to behave similarly?

29.2 Is There a Positive Shift in Commercial Enterprise Focus on Social and Sustainability Goals?

In recent times, there has been a significant shift in organizations' focus toward social and sustainability goals (Prieto et al. 2014; Bennet et al. 2019; Birkel and Muller 2021). It started with the United Nations reinforcement of seventeen sustainable development goals in 2015. Many countries have introduced new laws and regulatory frameworks to encourage enterprises to contribute to social and sustainability goals. In 2013, India was the first country to introduce Corporate Social responsibility (CSR) law wherein enterprises with a net worth of Indian Rupees (INR) 500 crore or more, or a turnover of over INR 1000 crore or a net profit exceeding INR 5 crore in a financial year has to contribute a minimum of 2% of net profit of preceding three years on CSR activities. This CSR law resulted in an increased focus on CSR activities and the firm's participation in global sustainability reports. The companies have started including the long-term purpose in their strategy formulation. This purpose-driven strategy helps companies to relook at and reinvent their vision and mission statements. These indicators of the increased CSR focus, participation in global sustainability reporting, and purpose-driven strategy reflect the growing trend of companies' attention toward social and sustainability goals. For example, Hewlett Packard (HP) has included sustainability goals in its strategy statement. These sustainability goals are mainly driven by the objective of impacting climatic actions, human rights, and digital equity. HP has announced ambitious climatic action goals, e.g., .net, and zero greenhouse emissions across the value chain by 2040 have infused sustainability-led innovation in the entire value chain, starting from research and development to customer delivery (<https://www.hp.com/us-en/hp-information/sustainable-impact.html>). In the recent past, HP has launched products that use ocean-bound plastic and recyclable material to have a lesser footprint on the environment. Illumina's sustainability goals are

focused on principles of Accelerate access to Genomics, Community Empowerment and Protect our environment. This renewed focus on environmental protection has helped Illumina to accelerate innovation for the environment and sustainable design and has developed sustainable packaging to reduce the environmental footprint of its products (<https://sapac.illumina.com/company/about-us/corporate-social-responsibility.html>).

On one side, the companies have started focusing on sustainability-led innovation; on the other side, companies have also started encouraging the employee to volunteer in social activities (Flammer and Luo 2017). Companies innovate the organization structure to get the right focus on sustainability initiatives. More and more companies have started appointment of a Chief sustainability officer (CSO) in the top management team (Fu et al. 2020). The appointment of the CSO increases the focus on the firm's socially responsible activities. It indicates a shift toward sustainability. One of many ways the commercial enterprise started the implementation of social and sustainability goals is through broad basing the corporate social responsibility (CSR) initiatives. Many commercial firms in India are spending more funds on CSR over the prescribed limit by law; this indicates the commercial firms increasing attention to social and sustainability goals. Corporate Social Responsibility has gained importance for corporates, nationally and internationally. Li et al. (2010) assert that in mature economies, such as those of the United States (US) and Western European countries, corporate communication is often used to highlight firm's commitments to CSR (Esrock 1998) and to legitimize a given company's corporate image in the eyes of its various stakeholders (Birch and Moon 2004; Ringov and Zollo 2007). There is a significant growth in CSR activities in both developed countries and developing countries. Past research on CSR indicates that sustainable CSR efforts create a positive impact on financial performance (Flammer 2013), develop intangible resources goodwill for the firms, and economic value creation along with social impact (Flammer 2015). These trends and literature and example of firms like HP and Illumina indicate the commercial enterprises' increased focus on social and sustainability goals.

29.3 Is There a Positive Shift in Social Enterprise Focus on Profit?

Management scholars have shown an increased interest in social enterprise research in last two decades, which has led to an exponential increase in number of research papers on social enterprise. In social enterprise literature, many researchers have used term social entrepreneurship and social enterprise interchangeably. Social entrepreneurship concept is mostly focused on individual entrepreneurs' motives to create a social organization which is typically used for startup, and the social enterprise is used for the established organization. Social enterprise development has been found to be a key enabler to create the positive impact on bottom of pyramid

population worldwide. While a single definition of social enterprise has not yet been established, most papers related to social enterprise research explain that these are the enterprises whose primary purpose is to create social value. These social enterprises are created for the purpose of creating the social impact in form of for-profit social venture, non-profit social venture, or hybrid social venture (Dees et al. 2004; Dees 2012). As per the literature, there are three types of social enterprise Non-profit social enterprises (NGO), for-profit social enterprises and hybrid social enterprise (Dees and Anderson 2003). The detail of these types is mentioned in Table 29.1.

For-profit social enterprises have emerged as a new form of social organization to meet social goals and build financial self-sufficiency through economic value creation. Given the financial self-sufficiency of FPSE, the UN has emphasized that social enterprise development is a crucial activity that will enable a bigger social impact and generate financial returns (UN Report 2015). It has given a further boost toward creating for-profit social enterprise. In some countries, the Government has introduced new laws for mandatory corporate social responsibility (CSR) for commercial enterprise to make impact for social good. The non-profit organizations (NGOs) face difficulties in getting grant and funding. There is very thin legal framework to monitor the NGO performance. In recent times, issues of governance and corruption in NGO have increased (Mason 2010), and therefore, the non-profit model of social enterprise has not been found to be effective. These governance failures in non-profit enterprises (NGOs) have also enabled the further growth of FPSE. The emergence of social enterprise is also explained from the perspective of moral legitimacy (Dart 2004; Nicholls 2010). For-profit social enterprises pursue both social and economic goals by continue evolving new business models and allocate the resources to both these contrasting goals (Stevens et al. 2015). The legal structure of any social enterprise is dependent on type of goals it pursues. As FPSE pursues both social and economic goals, their legal structure is influenced by taxations and social entrepreneurs know how about the legal structure (Haigh et al. 2015).

Table 29.1 Types of social enterprises taken from Peredo and McLean (2006) and authors have added additional comments

Focus of social goal	Focus on economic goal	Type of social enterprise
Enterprise goals are exclusively social	No	NGO
Enterprise goals are exclusively social	There is focus on economic goal to have self-sustainability of organization	FPSE/hybrid organization
Enterprise goals are mainly social but not exclusively	Focus is on economic goal too, return to investors	Not yet defined
Social goals are prominent among other goals	Focus on economic profit and keep social support	CSR
Using social goals to benefit economic goals	Focus is on economic profit	Cause branding

FPSE vital criteria are to generate income for self-sustainability and therefore share similar practices and policies as a commercial enterprise. There are many successful examples of FPSE. Aravind Eye care (<https://aravind.org>) hospital in India, a for-profit social enterprise, has become the largest hospital in the world for quality eye care. Significant portion of its patients get treatment either free of cost or at very low rate. The patients from all the economic backgrounds are treated equally. At supply side, Aravind eye care has innovated for affordable medical equipment and setup required for eye surgery; with large patient volume and economy of scale, the cost of surgery has been reduced significantly which has further expanded the social value. Narayana Hrudalayala (<https://www.narayanahealth.org/>) has developed the similar business model for heart patients started from a social enterprise and has expanded like any other commercial enterprise. Both examples illustrate that FPSE started with small social enterprise and have expanded to large enterprises by continue focus on economic value creation, furthermore, indicates their increase focus on profit maximization for expansion.

29.4 Comparison Between Commercial Enterprise and For-Profit Social Enterprise

Traditionally, commercial enterprises mainly have two motives first, to return higher economic value to stakeholders, and second to solve the problem in an innovative way. Social enterprise adds one more facet by adding a solution to social and environmental problems. From the perspective of academics, the knowledge related to the social enterprise field is evolving. On the other side, management theories related to commercial enterprise have already been established. As per the scholars of management research, the institutional theory is frequently used to define the legitimacy and purpose of an enterprise's existence, and the resource-based view (RBV) is used to explain an enterprise's competitive advantage. By applying these theories in the social enterprise context, this paper highlights many similarities between an FPSE and a commercial enterprise.

Every commercial enterprise creates some form of social value in form of employment and launches the product which meets societal need (Davis 1973). FPSE also creates social value to solve social problems. Both commercial enterprises and FPSE get support from institutional theory (Scott 2013) with a logic of gaining legitimacy by serving society. In this sense, both FPSE and commercial enterprise share the similarity.

Any firm whether commercial enterprise or a social enterprise needs various resources and capabilities to compete in market. It is not necessary that every firm has all required resources and capabilities at any time. Both commercial enterprise and FPSE need to develop valuable, rare, and non-substitutable resources to gain competitive advantage (Barney 1991), which therefore shares the similarity.

There is clear evident of innovation impact on economic value creation of firms. The firms use innovation to develop core competencies (Tucker 2001). There is a well-established theory of how the firms use core competencies and invest in right resources to create economic value. As FPSE have dual mission and its success depends on meeting both goals, therefore will need innovation to generate both economic and social value. Similarity commercial enterprises need to develop or acquire resources may be intangible by earning reputation through social value creation; therefore, both commercial enterprise and FPSE share the similarity.

Commercial enterprise faces tough competition. FPSE does face the competition from general business firms for economic value side and from NGOs for social value. Therefore, FPSE faces the similar challenges as the commercial firms in terms of gaining core competencies, utilization of resources, scaling the operation (Lada 2015). The resources-based view can explain these organizational practices to deliver bigger value for both social and commercial enterprises. Therefore, both FPSE and commercial enterprises apply the resource-based view for their long-term sustainability. Authors like (Dacin et al. 2010) advocated that social enterprise does not need a separate theory and it can be explained by existing organizational theories with a different context related to social.

On the other side, although the social enterprise is distinguished from commercial enterprise by its social purpose and occurs through multiple organizations forms, there is still significant heterogeneity in the types of activity that can fall under social enterprise. Austin et al. (2006) compared the social enterprise with commercial enterprise with the help of four different variables, Market Failure, Mission, Resource Mobilization, and performance measurement. Few research scholars have explained the differences between social and commercial enterprises in terms of motives, social value creation, and priorities. The entrepreneur's motive for social purpose is explained by identity theory (Wry et al. 2017). Attention-based view (ABV) theory is used to explain to attention allocation to multiple goals in FPSE (Stevens et al. 2015). Scholars of social enterprise have argued that FPSE differs from traditional non-profit organization (NGO) in terms of strategy, structure, norms, and values and represent a radical innovation in the social sector.

29.5 Conclusion

This paper highlights the emergence of a blurring boundary between a commercial enterprise and a for-profit social enterprise. The inclusion of social and sustainability goals in a company's strategy has increased its contribution to people, the planet, and communities, thereby building trust from all its stakeholders. Achieving social and sustainability goals contributes to meeting some of the basic needs of underprivileged society. We argue that for-profit social enterprise is like any other commercial enterprise in that it has to build its resources to provide efficient services to the poor. Therefore, in operational terms, a social enterprise has many similarities with a commercial enterprise. For the future, this paper argues that more organizations will

shift their purpose toward maximizing sustainable value creation rather than trying to reduce agency costs. Results of some of the FPSE indicate that these organizations can better fulfill societal needs. The growth of FPSE in the future will further boost its own legitimacy by becoming more efficient, and these organizations will further force the current commercial enterprise to increase attention to social and sustainability goals. In summary, the paper concludes that for-profit social enterprise shares many theoretical explanations with commercial enterprise and is to be explained as an extension of a commercial enterprise with an additional focus on social value creation. For the future, this paper opens the debate on the effectiveness of FPSE in terms of social value measurement and scaling operation, which will be key factors for FPSE to succeed as a mature organization.

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Part VII
Environmental, Social, and Governance
Compliance

Chapter 30

Emerging Advancements in Sustainable Entrepreneurship: A Systematic Literature Review and Bibliometric Analysis



Ruchi Mishra and K. B. Kiran

30.1 Introduction

After the United Nations ratified the Sustainable Development Goals (SDGs), which cover a wide range of environmental, social, and economic concerns, they became the dominant global guideline for addressing community advancement toward sustainable affluence (Esteves et al. 2021). Since the Rio de Janeiro World Summit in 1992, the essential summit gathering of the twentieth century, the phrase “sustainable development” has dominated public discourse. Humanity does have capacity to sustain development in order to accommodate needs of the present without compromising future generations’ capability to satisfy their own needs (Keeble 1988). Individuals, entrepreneurs, or businesses who are sustainability-driven within their core business and contribute to long-term development are referred as sustainable entrepreneurs. Businesses that can produce commercial solutions to pressing ecological and social issues will contribute to sustainability to a larger extent. As a result, sustainable entrepreneurship will be critical in ensuring the success of both business and our long-term future. Sustainable entrepreneurship is an innovative management strategy that ends up creating new goods and services, business practices, customer bases, and organizational procedures to increase the social and environmental benefits of corporate operations (Schmidpeter and Weidinger 2014).

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Entrepreneurial businesses that are sustainable in nature aim to safeguard the environment and the systems that sustain life and communities while continuing to pursue possibilities to produce potential products and services for profit, where profit is broadly defined as both economic and non-economic gains to individuals, the economy, and society (Shepherd and Patzelt 2011). Sustainable entrepreneurs are not just about putting social and environmental goals into action objectives nor are they just about the financial aspects of being an entrepreneurs (Rodgers 2010). Instead, this sort of economic ventures is concerned with accomplishing all three major goals while also being concerned with the welfare of succeeding generations and ecological preservation (Tilley and Young 2014). In a study, Niemann et al. (2020) discovered that when an organization has a higher level of preparedness for corporate entrepreneurship, it will ultimately result in an improvement of its environmental and financial performance.

The study on sustainable entrepreneurship and sustainable innovation emphasizes the vital position that start-ups can play as new market entrants in multi-level transitions. Previous studies have demonstrated that start-ups are the primary market players in adding new environmental innovations (Horne and Fichter 2022). Even after 20 years of the publication of the first seminal work on sustainable entrepreneurship, there still exists an inadequate understanding of the phenomenon's nature (Muñoz and Cohen 2018), and people are still apprehensive about investing in such businesses. Following the implementation of Agenda 2030, the concept of sustainable entrepreneurship has evolved. Nowadays, businesses consider those 17 goals when incorporating sustainability into their operations. As a result, the main aim of this review paper is to demonstrate the conceptual advancements of publications following the introduction of the SDGs, as well as to provide the status of the field while identifying central themes and future research directions in sustainable entrepreneurship.

The introductory part examines the concepts and foundations of the research field. The following topics are covered in the remainder of the paper: First, the research methods are discussed. Second, the bibliometric analysis is used to determine what scientific production is involved in the topic of sustainable entrepreneurship after which the central themes and sub-themes are outlined through systematic literature review of 77 articles published in A and A* category journal from ABDC ranking list. Subsequently, the observations, results, and future research directions are addressed.

30.2 Research Methods

30.2.1 Research Protocol

This analysis will look at academic publications on sustainable entrepreneurship that have been published since global leaders adopted the Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development. The systematic literature

review is expanded on the review of (Ali 2021) and is based on the framework utilized by (Muñoz and Cohen 2018) and we relied on (Candeias Fernandes and Franco 2021) and (Thananusak 2019) for bibliometric analysis. Scopus was the database used to find relevant literature.

The database was searched using the term “sustainable entrepreneurship”, and the database’s filter option was controlled to display the results only in the title, abstract, or keywords. We do not take into account any related terms since we believe they are outside the scope of this review. The search was conducted on August 8, 2022, and the time period chosen for the study was 2015–2022, as the SDGs were introduced in 2015. The initial search on the keyword “sustainable entrepreneurship” yielded 656 documents, which were reduced to 557 after limiting the study period. Later, the subject field was narrowed down to *Business Management and Accounting* and *Economics, Econometrics, and Finance*.

All publications other than articles (book chapters, reviews, conference proceedings, etc.) were excluded from the analysis. Later, we restricted the keywords to “sustainable entrepreneurship”, “sustainability”, and “entrepreneurship”, and selecting only the final stage publication yielded 199 documents. Only articles that had been peer-reviewed and published in English were considered. We received 194 articles after applying this filter, and *bibliometric analysis* was performed upon these 194 documents. And in order to conduct *systematic literature review*, we refined our samples and chose articles that were published in A and A* ranked journals from the ABDC (The Australian Business Deans Council) publication quality list (Table 30.6 shows a list of A and A* journals that publish papers on sustainable entrepreneurship since 2015). This process yielded 83 articles, 6 of which were found to be review papers. Hence, a total of 77 papers were reviewed. Figure 30.1 illustrates the review process and methodology used within our analysis.

30.2.2 *Bibliometric Techniques*

To analyze the advancements and distinct technicalities of the published articles on this topic, 194 articles were subjected to various bibliometric analyses (Candeias Fernandes and Franco 2021; Thananusak 2019). The primary benefit of bibliometric methods is that they bring quantifiable specificity into the subjective assessment of publications (Paul and Criado 2020; Piwoswar-Sulej et al. 2021). VOSviewer ver.1.6.18 software was used for bibliometric analysis to examine the citation trends, conceptual configuration, and subject areas investigated in the sustainable entrepreneurship research (Thananusak 2019). VOSviewer software is an essential platform for highlighting, visualizing, and discovering scientific maps (Terán-Yépez et al. 2020).

Citation analysis was used to identify elevated documents and authors (Thananusak 2019). Co-citation of authors was also performed in order to determine the relationship between two cited authors based on the number of citations they received altogether (Candeias Fernandes and Franco 2021). The most densely

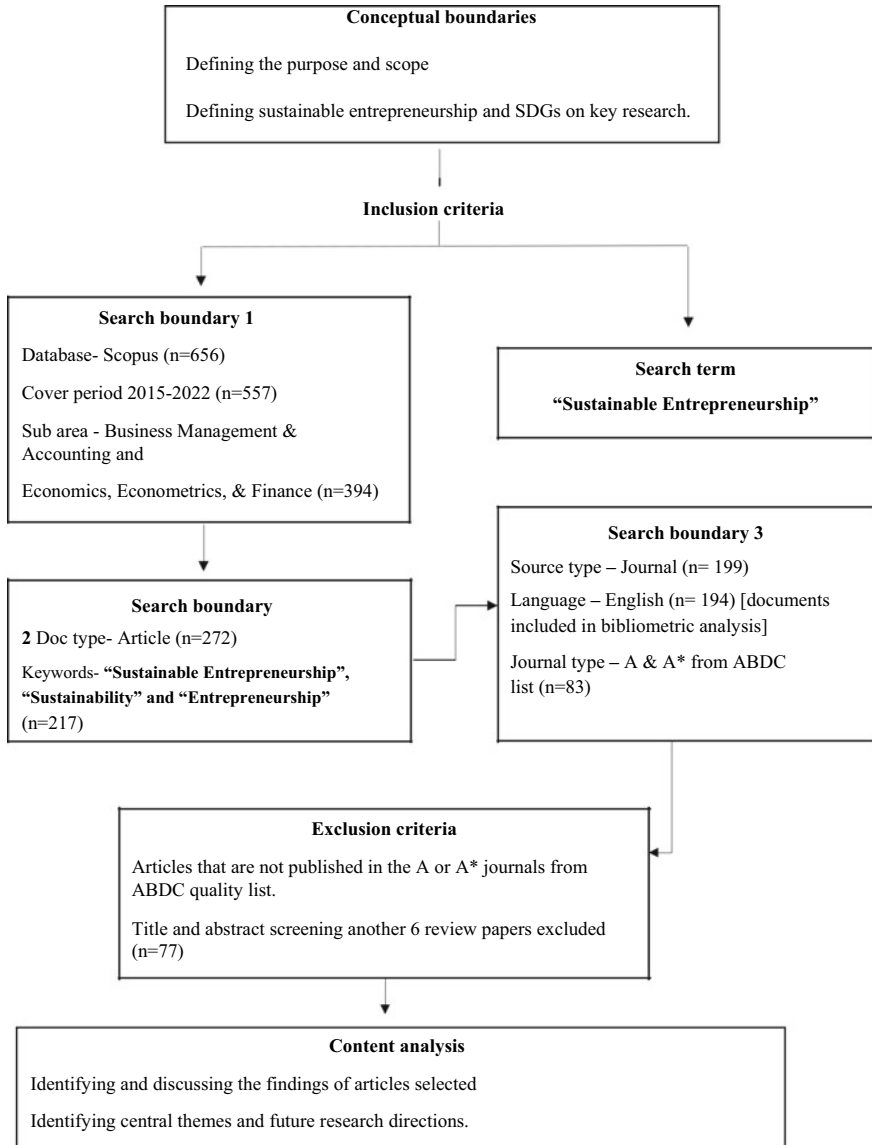


Fig. 30.1 Review process

concentrated and emerging topics in the sustainable entrepreneurship knowledge base were scrutinized using keyword co-occurrence analysis.

30.3 Results and Analysis

This section is divided into two parts. The first discusses the scientific output of this field’s research in terms of publications and citations, in addition to identifying the most cited authors and countries undertaking this research. In the second subsection, only articles from A and A* ranked journals are preferred, and content analysis is performed to identify themes and sub-themes.

30.3.1 Descriptive Analysis

As mentioned in Sect. 2.2, various bibliometric analysis techniques are used to provide a comprehensive view of various aspects of sustainable entrepreneurship.

30.3.1.1 Keyword Co-occurrence

VOSviewer 1.6.18 was used to perform an author’s keyword co-occurrence analysis (van Eck and Waltman 2010) (Fig. 30.2). The purpose of this sort of analysis is to establish the research structure of a science discipline by taking into consideration the generated thematic clusters (Candeias Fernandes and Franco 2021; Molina-García et al. 2022). An arrow denotes the relationship between two distinct keywords.

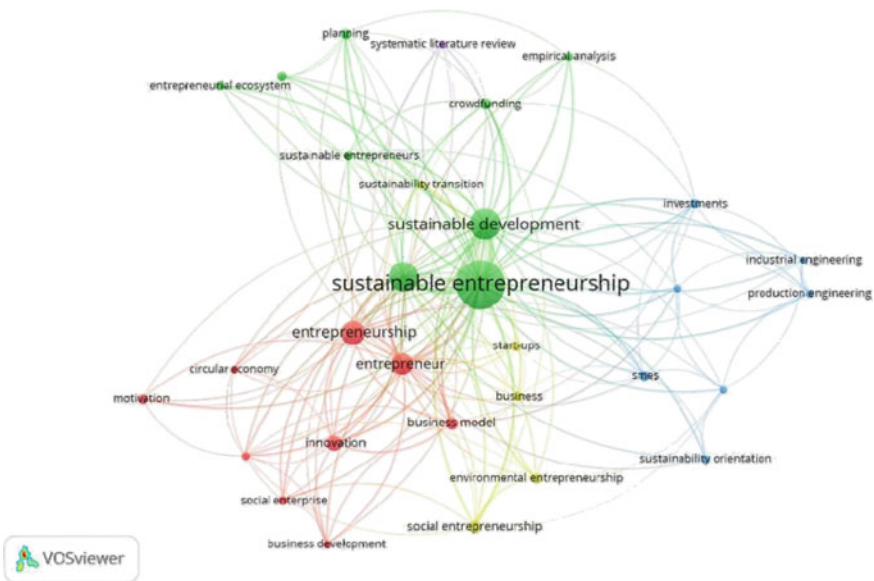


Fig. 30.2 Co-occurrence of keywords

Table 30.1 Keyword co-occurrence analysis

Keyword	Occurrences
Sustainable entrepreneurship	154
Sustainable development	62
Sustainability	55
Entrepreneurship	38
Entrepreneur	31
Innovation	15
Social entrepreneurship	12
Business model	10
Crowdfunding	8
Environmental entrepreneurship	7

The width of the arrow exemplifies the knot’s potential. When two keywords are positioned side by side and associated with an arrow, they form a relationship and display some conceptual meaning (Oliveira et al. 2022). 31 of the total 925 keywords appear at least 5 times in the analysis. Table 30.1 presents most frequently occurring keywords in the area of sustainable entrepreneurship since 2015, and Fig. 30.2 shows the clusters of keywords formed.

Five clusters of keywords were found through the analysis. The term “sustainable entrepreneurship” has occurred 154 times, followed by the concepts “sustainable development” (62 times), “sustainability” (55 times), “entrepreneurship” (38 times), and “entrepreneur” (31 times) (as illustrated in Table 30.1), and with this, we get the top most cited concepts. This frequently occurring keyword provides insights into the subject of study results that expresses the SE literature since the SDGs’ introduction.

To comprehend the frequently co-occurring keywords into themes, a co-word map was generated using VOSviewer software. The most studied topics are categorized into five themes. The first theme entrepreneurship (red cluster) puts emphasis on how sustainable entrepreneurs establish as well as how they integrate triple bottom line within their enterprise. Entrepreneurs develop different business models and innovate their products in order to incorporate sustainability into their operations. The theme’s subset keywords include business development, business model, circular economy, entrepreneur, entrepreneurship, environmental economics, innovation, motivation, and social enterprise. The second theme, sustainable entrepreneurship, focuses on empirical analysis of articles that specifically addresses how, with the assistance of the entrepreneurial ecosystem, sustainable entrepreneurs take steps toward achieving the goal of sustainable development. This subset keywords are crowdfunding, empirical analysis, entrepreneurial ecosystem, planning, sustainability, sustainable development, sustainable entrepreneurs, and sustainable entrepreneurship.

The third theme entrepreneurial orientation (blue cluster) deals with the individual’s orientations that induces them to invest in sustainable and small and medium enterprises. The subset keyword encompasses entrepreneurial orientations, production engineering, industrial engineering, sustainability orientations, SME’s,

and sustainable businesses. The fourth theme is about environmental and social entrepreneurship (yellow cluster) and how combining these two can lead to a transition to sustainability. Sub-keywords include business, environmental entrepreneurship, social entrepreneurship, start-ups, and sustainability transition. The final theme (violet cluster) includes all of the articles related to the systematic literature review on topics related to sustainable entrepreneurship.

30.3.1.2 Citation Analysis

Citation analysis is a method of determining the relative significance and impact of an article, publication, or author based on the number of times that article, publication, or author has been cited in the works of others. Figure 30.3 shows the citation analysis of documents, and Fig. 30.4 shows the citation analysis of authors.

As mentioned in Table 30.2, (Schaltegger et al. 2016) is the most cited document, with 317 citations, followed by Belz and Binder (2017), Muñoz and Cohen (2018), Bocken (2015), and Hörisch (2015) with 228, 158, 145, and 118 citations, respectively. All of these authors basically discuss about the context of sustainable entrepreneurship along with how advancements can be made in the businesses, as well as the availability of funding for such advancements.

Table 30.3 highlights the authors who have had the greatest impact on sustainable entrepreneurship since 2015. Author citation analysis was performed for this purpose. Some of the most prolific authors among the 459 are Schaltegger (478), Ludeke-Freund (471), Munoz (354), Hansen (352), Fichter (261), Cohen B. (245), Horisch J. (236), Belz (228), Binder (228), etc.

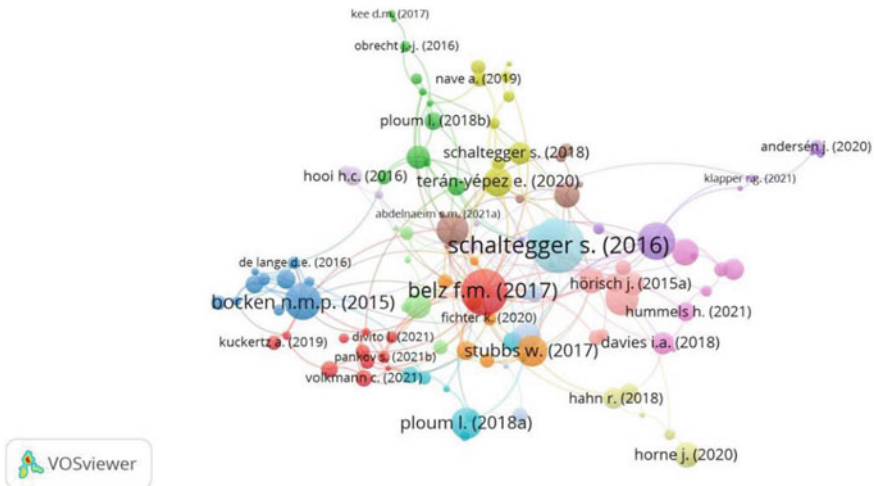


Fig. 30.3 Citations of documents

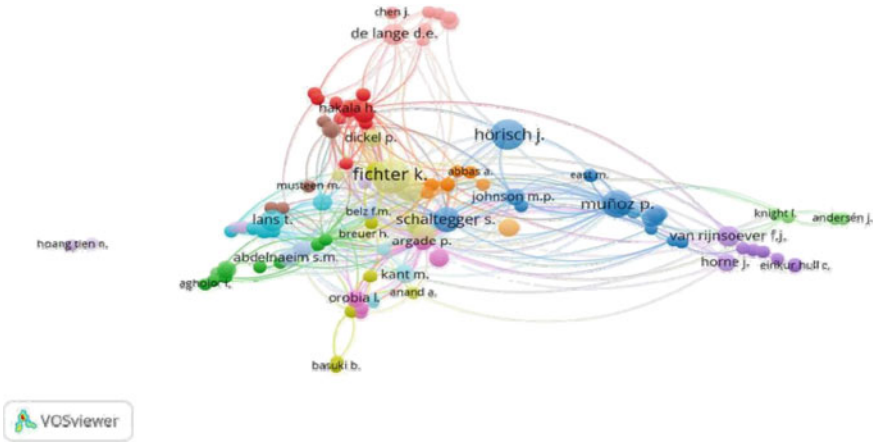


Fig. 30.4 Citations of authors

Citation analysis of countries was also performed with the minimum number of documents set at 5, revealing that only 18 of the 56 countries meet the threshold. As shown in Fig. 30.5 and illustrated in Table 30.4, Germany has the most documents with 42 total and 1714 citations, followed by the UK and the USA with 21 documents 753 citations and 20 documents 305 citations, respectively. The table shows that there are very few papers from countries such as India, China, in the field of sustainable entrepreneurship, in contrast to other fields. More understanding about the construct of sustainable entrepreneurship is considered necessary in countries, which necessitates additional research in this field.

30.3.1.3 Co-citation Analysis

This section investigates the “intellectual structure” of the available literature on sustainable entrepreneurship. A co-citation map depicting the association between highly co-cited authors was created using author co-citation analysis (ACA) (Muñoz and Cohen 2018; Thananusak 2019). A visualization map representing the intellectual similarity between the authors of the field of study was created using VOSviewer software. ACA discovered an author co-citation network of 14,234 authors in the reference list of 194 documents in the review database. ACA identified 71 authors who happened to meet this criterion by using a threshold of 25 co-citations. Figure 30.3 depicts the ACA map, which portrays these authors (Fig. 30.6).

Schaltegger (222), Cohen (171), Shepherd (161), Wagner (155), Patzelt (131), Dean (118), and Munoz (112) (as given in Table 30.2) are among the authors who have received the most citations in the literature on sustainable entrepreneurship. The author co-citation analysis was divided into five “schools of thought” (Thananusak 2019). The first (red cluster) and third (blue cluster) school of thought is concerned

Table 30.2 Top ten most cited papers

Authors	Article	Journal	Citations
Schaltegger et al. (2016)	Business models for sustainability: a co-evolutionary analysis of sustainable entrepreneurship, innovation, and transformation	Organisation and Environment	317
Belz and Binder (2017)	Sustainable entrepreneurship: a convergent process model	Business Strategy and Environment	228
Muñoz and Cohen (2018)	Sustainable entrepreneurship research: taking stock and looking ahead	Business Strategy and Environment	158
Bocken (2015)	Sustainable venture capital—catalyst for sustainable start-up success?	Journal of Cleaner Production	145
Hörisch (2015)	Crowdfunding for environmental ventures: an empirical analysis of the influence of environmental orientation on the success of crowdfunding initiatives	Journal of Cleaner Production	118
Vuorio et al. (2018)	Drivers of entrepreneurial intentions in sustainable entrepreneurship	International Journal of Entrepreneurial Behaviour and Research	116
Stubbs (2017)	Sustainable entrepreneurship and B Corps	Business Strategy and Environment	106
Ploum et al. (2018a)	Toward a validated competence framework for sustainable entrepreneurship	Organization and Environment	105
Terán-Yépez et al. (2020)	Sustainable entrepreneurship: review of its evolution and new trends	Journal of Cleaner Production	94
Hoogendoorn et al. (2019)	Sustainable entrepreneurship: the role of perceived barriers and risks	Journal of Business Ethics	87

Table 30.3 High impact authors on sustainable entrepreneurship, 2015–2022 ($n = 194$)

Author	Documents	Citations
Schaltegger S.	4	478
Lüdeke-Freund F.	3	471
Muñoz P.	5	354
Hansen E. G.	2	352
Fichter K.	8	261
Cohen B.	3	245
Hörisch J.	6	236
Belz F. M.	1	228
Binder J. K.	1	228
Lans T.	3	158
Tiemann I.	4	157
Fellnhofer K.	2	149
Bocken N. M. P.	1	145
Blok V.	2	139
Omta O.	2	139
Ploum L.	2	139
Puumalainen K.	1	116
Vuorio A. M.	1	116
Stubbs W.	1	106

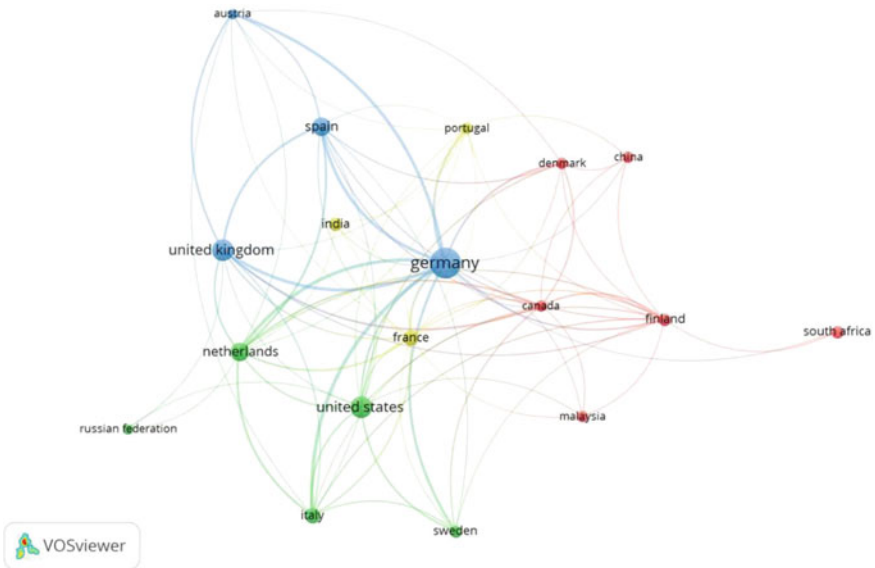


Fig. 30.5 Citation analysis of countries

Table 30.4 List of countries, number of documents, and citations

Country	Documents	Citations
Germany	42	1714
UK	21	753
USA	20	305
Spain	16	402
Netherlands	15	592
France	11	231
Italy	11	123
India	8	90
Finland	7	282
South Africa	7	48
Sweden	7	135
Canada	6	109
China	6	81
Denmark	6	119
Malaysia	6	63
Portugal	6	164
Austria	5	472
Russian Federation	5	126

with the design of a sustainable entrepreneurial business model, or how entrepreneurs take the initiative to establish sustainability within the business through innovations in the business process model (Hahn et al. 2018; Pablo Muñoz and Cohen 2017; Tilley and Young 2014). The second school (green cluster) is concerned with the ecosystems and mechanisms that assist entrepreneurs in putting their idea into actions (Table 30.5).

It discusses how entrepreneurs can obtain necessary financial needs with the help of crowdfunding and venture capitalists, as well as how universities can act as a support system in establishing such enterprises (Breuer et al. 2018; Lüdeke-Freund 2020; Schaltegger et al. 2016, 2018; Tenner and Hörisch 2021). The fourth (yellow cluster) and fifth (violet cluster) authors deal with how value is created through these ecological start-ups and the monitoring aspect of sustainable entrepreneurs, how their work contributes to regional development and better environmental health (Belz and Binder 2017; Kuckertz et al. 2019; Muñoz and Cohen 2017; Shepherd and Patzelt 2011).

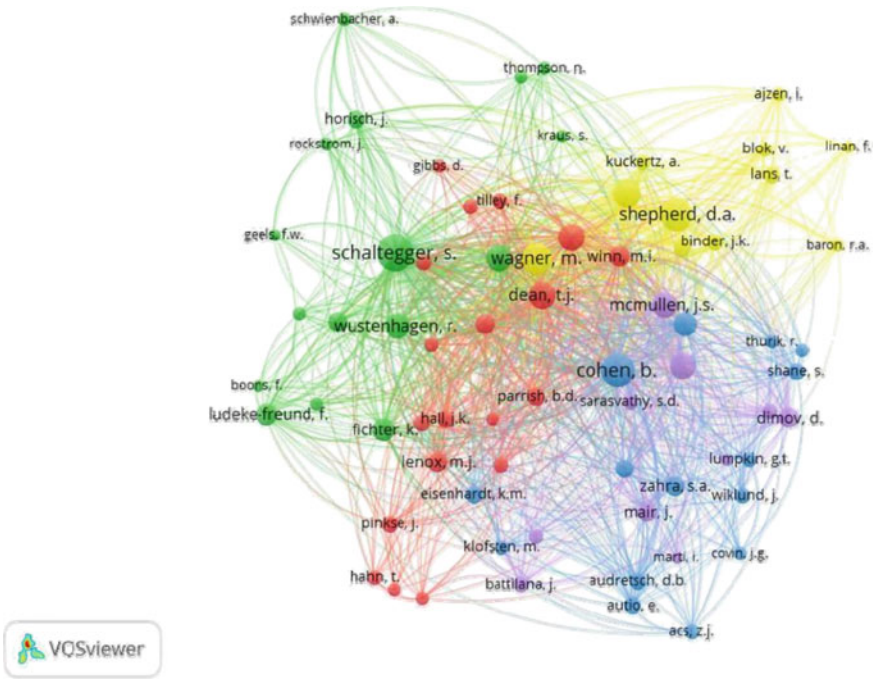


Fig. 30.6 Co-citation of authors

Table 30.5 List of most co-cited authors

Author	Citations
Schaltegger, S.	222
Cohen, B.	171
Shepherd, D. A.	161
Wagner, M.	155
Patzelt, H.	131
Dean, T. J.	118
Munoz, P.	112
Hockerts, K.	109
York, J. G.	109
Mcmullen, J. S.	101

30.3.2 Content Analysis

This section delves into the specifics of the themes and sub-themes discovered in the articles under consideration. Articles that have been published in A or A* category journal under the ABDC journal ranking are considered for the systematic analysis

Table 30.6 Article distribution and total citations by journal

Journal	Number of articles	Citations
Journal of Cleaner Production	35	994
Business Strategy and the Environment	17	670
Small Business Economics	7	129
Journal of Business Venturing	4	157
Journal of Business Research	4	31
Journal of Business Venturing Insights	3	118
Technology Forecasting and Social Change	3	30
Annals of Tourism Research	2	45
Journal of Small Business Management	2	14
Business and Society	1	23
Organisation Studies	1	15
Amfiteatru Economic	1	12
Journal of Sustainable Tourism	1	8
Asia Pacific Journal of Tourism Research	1	7
International Journal of Entrepreneurship and Small Business	1	6

(Fig. 30.1). The analysis identified five major themes within the scope of sustainable entrepreneurship that is on the upsurge following the introduction of SDGs. The main findings and outcomes are discussed.

30.3.2.1 Conceptual and Contextual Development

Content analysis aids in the systematic synthesis of data, which aids in the achievement of valid conclusions and the identification of the field's underlying pattern. Several empirical studies have been conducted using existing literature data to develop new business models or concepts that incorporate sustainability. To better understand the dynamics of sustainable entrepreneurship, conceptual exploration is required. Individuals are taking up sustainable entrepreneurial initiatives, but so are small and medium-sized businesses and organizations (Kuckertz et al. 2019). Klapper et al. (2021) focused on a relatively unstudied aspect of sustainable entrepreneurship, emphasizing the importance of striking a balance between the individual and the organization for growth. The study of hybrid organizational theory, which investigates the manifestation of social and environmental value beside the economic value within entrepreneurial businesses, has grown at an exponential rate (Davies and Chambers 2018; Hahn et al. 2018). Business model innovations demonstrate the importance of holistic business models in the timely implementation of sustainability in corporate culture.

Not everything that is innovative is entrepreneurial (Kee 2017). Incorporating aesthetics to translate creative abilities into organizational sustainability plans (Poldner et al. 2017a, b) indirectly introduces sustainable intrapreneurship. Digital sustainable entrepreneurship is on the rise at present. By combining various multimedia content and infrastructures, they provide arenas for interactiveness, co-creation practices, and stakeholder interoperability (Gregori and Holzmann 2020). The study of sustainability approaches in tourism is also advancing and has a promising future (Figueroa-Domecq et al. 2022; Sørensen and Grindsted 2021). Swanson and DeVereaux (2017) provided a theoretical framework for culturally sustainable entrepreneurship and investigated how it differs from traditional entrepreneurship. Since the concept is still in its early stages (Ali 2021), similar new ideas and models (Lüdeke-Freund 2020) are being developed to build the conceptual framework and model of sustainable entrepreneurship (Table 30.6).

According to Figueroa-Domecq et al. (2022), women are more likely to value social and environmental sustainability, as well as the risk variable, because women are more conscious about the ecological problems than men (Fernández et al. 2021). Therefore, it is possible to assert that gender plays a crucial role in establishing a company that incorporates sustainability. The introduction of the concept of place-based entrepreneurship also serves as a motivator to contribute to long-term sustainability. Kibler et al. (2015) argued that distinguishing between emotional (“caring about the place”) and instrumental (“using the place”) considerations was necessary for the sustainable entrepreneurial journey. Therefore, we can state that recent research has discovered that place attachment plays an important role in the establishing a motive of starting a more sustainable oriented enterprises, which eventually contributes to the development of more comprehensive and integrated, insurgent pathways in the journey of sustainable entrepreneurship.

30.3.2.2 Sustainable Entrepreneurial Process

This theme of our review includes research articles about individuals’ sustainable orientations and the process by which they capture opportunities that have ecological, social, and economic benefits. Muñoz and Cohen (2017) conducted an explicit study to comprehend the SE process. The demand-side model, as developed by (Liu and van Witteloostuijn 2020), provides novel insights into when and where new entrepreneurial populations emerge. Identifying factors that encourage the formation of impact start-ups is a burning topic in academic research (Horne and Fichter 2022). O’Neil et al. (2022) developed a process model that shows how efforts to address “internal strivings” for authenticity are the starting point for founder authenticity activity before efforts to “accommodate” external prescriptions are added. Similarly, Ploum et al. (2018a, b) revealed that pro-environmental behavior values and moral competencies have a positive and significant relationship with sustainable development ideas. Individuals’ sustainable entrepreneurial orientation is heavily influenced by their personal background and motivation (Argade et al. 2021). Silajđić et al. (2015) highlight that self-motivation and vision statement, locality, and a

progressive orientation in terms of sustainability are vital sociological constructs for those “green-oriented” businesses. Their attitude toward sustainable entrepreneurship, perceived entrepreneurial desirability, and perceived entrepreneurial feasibility supplement their entrepreneurial intentions driven by sustainability (Sher et al. 2020). Kant and Kanda (2019) describe four interconnected factors that influences intermediaries’ survival. Long-term sustainability requires innovation. Strategic orientation, resource orientation, management structure, reward philosophy, growth orientation, and entrepreneurial culture are all determinants that contribute to an institute’s ability to innovate (Fellnhöfer 2017). As a result, in order to survive and compete in the market, businesses and organizations should encourage innovation. The findings of (DiVito and Bohnsack 2017) deliver sustainable entrepreneurs with insights into how to allocate the company’s resources both internally and externally through strategic planning and decisions that is aligned with their sustainability orientation. According to Johnsen et al. (2018), entrepreneurs, in addition to generating environmental and social benefits by making goods durable, continue to disrupt existing styles through the development of new ideas about a style. When there are several non-profit organizations present that provide the necessary support, it ultimately induces entrepreneurs to better identify sustainable opportunities (DiVito and Ingen-Housz 2021) (Fig. 30.7).

Out of 77 papers, approximately ten are related explicitly to the subtheme of entrepreneurs’ sustainability orientation. Research indicates that high-performance work systems and entrepreneurial orientation have a major impact on organizational performance (Kim et al. 2021) and environmental performance (Adomako et al. 2021). Andersén et al. (2020) found that small businesses with green resources looking to expand will benefit when entrepreneurs begin to develop green purchasing habits.

According to Eller et al. (2020), entrepreneurs who understand the consequences of prevailing challenges are more likely to serve as a buffer from predicament to course of action identification. Based on four case studies, Belz and Binder (2017) developed a model that outlines the process of sustainable entrepreneurship. It was discovered that the triple bottom line (Elkington 1998) of ecological, social, and economic goals is implemented sequentially rather than concurrently. Some entrepreneurs are driven by a sense of purpose and start businesses with the goal of benefiting society or the environment (Muñoz et al. 2018). As a result, several businesses are being established, such as B corps, born sustainable firms (Knoppen and Knight 2022), and purpose-driven enterprises that have predefined levels of commitments and go to certain lengths to meet those commitments. Combining market and social logic, which is the main practice of B corps, was discovered to result in innovation sites that generate novel organizational forms (Stubbs 2017).

The primary role of a stakeholder is to help a company meet its organizational goals having contributed insight and experience to a project. Stakeholders are critical to the advancement of the sustainability cause within businesses (Pankov et al. 2021a, b). Therefore, enterprises should always ensure that the needs of stakeholders are met

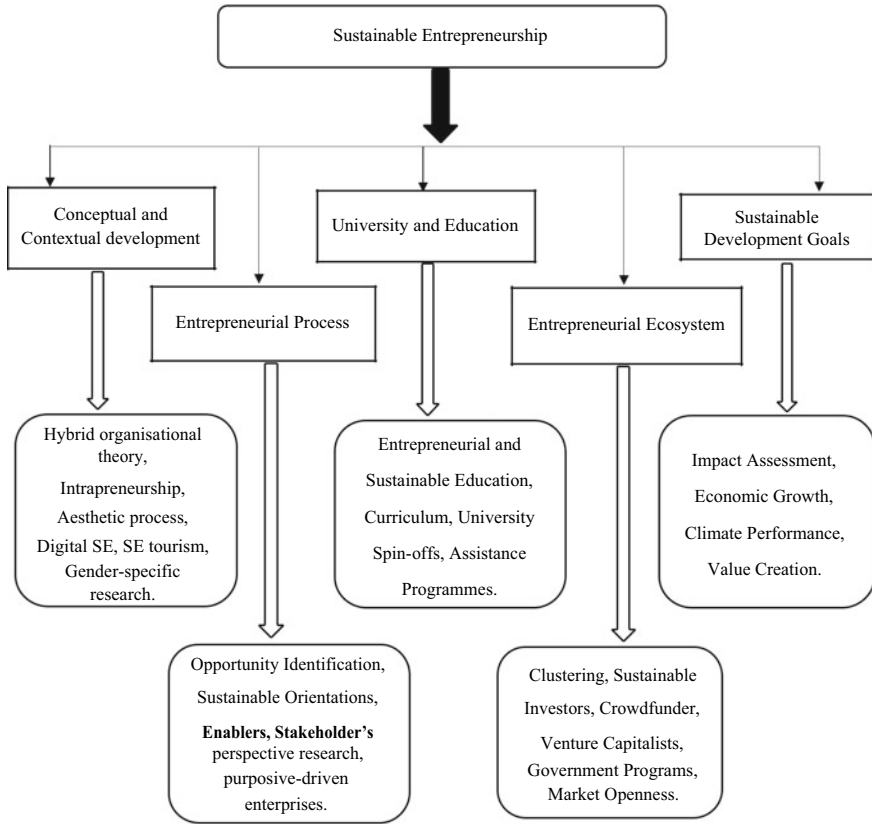


Fig. 30.7 Design of literature review on sustainable entrepreneurship

to the greatest extent possible (Kautonen et al. 2020) to the greatest extent possible. Therefore, CSR expenditure is not a sacrifice but rather contributes significantly to sales turnover and has a positive relationship with shareholder funds (Anbarasan and Sushil 2018).

30.3.2.3 University and Education

This theme is concerned with papers related to university education, explicitly entrepreneurial education and sustainability education. Also how, with the assistance of universities, new businesses are formed utilizing the knowledge generated by academic activities (Nave and Franco 2019). Fernández-López et al. (2022) provide insights into the forces that shape the growth patterns of university spin-offs at the

firm level. Similarly, Wagner et al. (2021) investigated the effects of university-linked assistance programs on long-term entrepreneurial ecosystems and regional growth and (Fichter and Tiemann 2018) examined the determining factors that influences universities to support for sustainable entrepreneurship.

The study discovered that university-linked support programs have a positive impact on sustainable entrepreneurial ecosystems via certain knowledge spill-over modes. There is no such thing as a silver bullet for the curriculum of sustainable entrepreneurial education; instead, there is a diverse range of topics for diverse contexts. However, Johnson and Hörisch (2022) emphasize that causal and effectual behaviors are necessary aspects of sustainable entrepreneurship education, and that When collaborating with industry or other key parties, project-based learning in multidisciplinary teams is a recommended approach for delivery methods (Faludi and Gilbert 2019). Education is the key to closing the gap between now and a sustainable future. Students should be sufficiently motivated by education to set up innovative business models and contribute to the achievement of the triple bottom line goal. Students in general, value sustainability competencies and believe that such competencies are required to be competitive in the future labor markets (Grindsted 2016).

30.3.2.4 Entrepreneurial Ecosystems

The entrepreneurial ecosystem perspective takes into consideration the system-wide conglomeration of various actors, attributes, and relationships, all of which have an impact on entrepreneurial activities and are the defining elements of an ecosystem (Ács et al. 2014; Tiba et al. 2021). The concept of sustainable entrepreneurial ecosystems emerged alongside the concept of sustainable entrepreneurship. The SEE concept is defined as broad development aid strategy which aims to foster sustainable new ventures that add social, environmental, and economic value to society (Cohen 2006; O’Shea et al. 2021; Spiegel 2008). Both conventional and sustainable entrepreneurship require ecosystem support, but sustainable entrepreneurship requires it the most (Volkmann et al. 2021) since there exists lack of sufficient finance, market access, and public awareness for such sustainable businesses, along with many other factors. Pankov et al. (2021a) discover that sustainable entrepreneurs rely on three distinct configurations of micro-level practices when advocating sustainability in entrepreneurial ecosystems: establishing a supportive environment, intimidating normative standards, and re-evaluating the sustainability paradigm. O’Shea et al. (2021) find that for the initial step of intentionally creating an ecosystem, there should be an actual shared sustainable intent and an encouraging emotional atmosphere. Furthermore, information and communication technology (ICT) plays a significant and supportive role in the development and evolution of sustainable entrepreneurial ecosystems (Pankov et al. 2021b).

Since sustainable businesses are risky as they do not aim to earn profits explicitly, the formation of clusters can help investors reconsider investing in a risky project, as well as enterprises raise enough funds to start their businesses. In support of this, (de

Lange (2016) concludes that looking to invest in an integrated cluster of enterprises might be less risky than making investments in a single corporation. Furthermore, Sunny and Shu (2019) studied how geographical clustering can act as a driver of sustainable entrepreneurship.

Start-ups considering sustainability frequently struggle to find sufficient resources (Kahupi et al. 2021) as investors are less confident due to low expected returns on investment. Because financial resources are critical for any business to survive in the market for the long term, analyzing the behavior of investors who invest in sustainable start-ups becomes critical. Several papers related to the behavior of Investors, Crowdfunder, and Venture Capitalists who support sustainability are found in this review. de Lange (2017) in his paper investigates whether investors value sustainability. While investors avert sustainable firms, primarily those that are environmentally sustainable, the study discovered that they favor socially conscious national contexts. Bocken (2015) aided in better understanding of the role of sustainable venture capital in the performance of sustainable start-ups by categorizing motivating factors, investment theses, attributes of success and failure, and viewpoints on the potential position of venture capitalists. The benefits of investing in green or sustainable businesses outweigh the risks and drawbacks of doing so (Hegeman and Sørheim 2021), but the investors must be patient in their return expectations (Bocken 2015). Similarly, de Lange (2019) investigates representatives who come from a sophisticated financial field and engage in the risky and fairly young field of sustainable entrepreneurship. The endorsement by corporate venture capitalists has considerable power to validate new sustainable initiatives in the eyes of other investors (de Lange and Valliere 2020). Crowdfunding is also a novel method of raising funds for environmentally friendly and sustainability projects (Bento et al. 2019). Chen et al. (2018) stated that the theme of sustainable crowdfunding is influenced by public opinion. Hörisch (2015) discovered that projects with the ability to produce tangible results and projects that have a third-party sustainable seal of approval (Pabst et al. 2021) are more likely to meet their funding goals through crowdfunding. In addition, the paper asserts that businesses seeking crowdfunding must be registered as non-profit businesses. Tenner and Hörisch (2021) investigate the socio-demographic characteristics of crowdfunding investors and discovers that the typical investor in sustainability-focused crowdfunding projects is under 50 and has a bachelor's degree or higher. Furthermore, the article revealed that neither gender nor income had a significant effect on investor choice.

Smaller businesses can also enhance the capabilities of incorporating sustainability into their operations if they receive adequate support and assistance from the government. In support of this, Silajdžić et al. (2015), in their case study, stated that the government could help SMEs overcome key barriers and encourage investment in green markets by providing the necessary assistance. Steinz et al. (2016) also discover that the government can remove regulatory barriers, making it easier for individuals and firms with unique, sustainable ideas to enter the market. Hapenciuc et al. (2015) in his study examined the correlation between marketing types and sustainable entrepreneurship and found that interaction marketing, network marketing, and database marketing significantly correlate with sustainable entrepreneurship.

30.3.2.5 Sustainable Development Goals

This theme includes papers that aim to achieve different goals of 17 Sustainable Development Goals through sustainable entrepreneurship. Horne et al. (2020) reveal significant correlations between multiple goals that are frequently addressed collaboratively, as well as between entrepreneurial activities that are aligned with the goals. Sustainable entrepreneurship is defined as innovation in manufacturing or production methods that benefit the environment and society in addition to economic growth. As a result, Gu and Wang (2022) discover that sustainable entrepreneurship contributes to economic growth through technological research and development. For sustainability, start-ups employ technologically oriented, socially oriented, and environmentally oriented forms of value creation. Typically, when attempting to implement a high level of sustainability ambition value creation, it is done through technology (Kuckertz et al. 2019; Martin-Rios et al. 2020). Aagaard et al. (2021) investigate six distinct forms of business experimentation used by cleantech start-ups to yield long-term benefit. Leendertse et al. (2021) found that start-ups with more emerging technologies have greater potential climate performance, which also represents as a useful intermediary in the interaction among both technical attributes and company's overall performance. Because the opportunities presented by climate change are not the same (Crecente et al. 2021), sustainable entrepreneurship may take different forms for different entrepreneurs.

In his study, Dhahri et al. (2021) discovered that when entrepreneurship is pursued after contemplating the opportunity, it positively contributes to all three facets of sustainable development, whereas when started in the necessity, have a negative impact on sustainability. Sustainable rural entrepreneurship contributes to rural capacity building, bridging the rural–urban divide, and achieving the triple bottom line goal (Soleymani et al. 2021). Esteves et al. (2021) discuss the significance of shared resources and how collaborative strategies involving communities and partners who support commons can achieve socio-ecological and SDG goals within specific commons systems as well as larger commons ecologies. Hummels and Argyrou (2021) also explain how upholding planetary boundaries can help in transition toward sustainable development. Sustainable entrepreneurs contribute by establishing niche-specific sustainability-oriented intentions (SOIs). These ecopreneurs serve the purpose of enhancing these entrepreneurs' visibility at the regime level, putting pressure on the regime, and ultimately encouraging existing firms to adopt these standards proactively, while also providing governing agencies with the ability to raise minimum standards at the regime level (Hörisch 2018).

Several articles relating to the impact assessment of start-ups on sustainability were discovered in the analysis. Trautwein (2021) researched and published a review paper that revealed critical perspective on appropriate evaluation of struggles and strategies for assessing sustainability impact. Gu and Zheng (2021) explained the impact of sustainable entrepreneurship using the environmental Kuznets Curve. Fichter and Tiemann (2020) discover that promoting sustainability in a business

plan competition encourages more entrepreneurs to integrate sustainability into their start-ups, ultimately leading to the achievement of the 2030 Agenda for sustainable development.

30.4 Discussion and Conclusion

Start-ups that inspire sustainability can eventually lead to the attainment of the Sustainable Development Goals for 2030. As a result, research that promotes start-ups, particularly sustainable start-ups, while taking into account the triple bottom line of achieving economic, social, and environmental goals is required and necessary in order to enshrine sustainability in the minds of current and prospective entrepreneurs. Even after two decades of the first published article on sustainable entrepreneurship, the study discovered, that there exists a lack of a comprehensive understanding of sustainable entrepreneurship. As a result of bibliometric analysis and a systematic literature review, this article offers a useful overview of the current state of sustainable entrepreneurship.

The co-word map was created using keyword co-occurrence analysis to identify the most focused area of study by scholars following the introduction of sustainable development goals. The analysis of the five clusters discovered that the focus of scholars tends to cover the basic models of the field. The first theme consists of articles that address how sustainability is incorporated into the enterprise. The second theme, on the other hand, includes topics related to a sustainable entrepreneurial ecosystem, which creates a supportive environment for entrepreneurs to establish and operate. The third theme found the articles relating to how the orientation of an ordinary entrepreneur differs from that of a sustainable entrepreneur. What drives these entrepreneurs to pursue the field of sustainability? The fourth theme is about environmental and social entrepreneurship and how integrating these two could perhaps lead to a switchover to sustainability. The final theme was identified, which includes all of the literature review papers concerned with the field under consideration.

Through citation analysis, performance analysis was carried out using various bibliometric methods to determine the productivity ratio and relevance of authors, journals, and countries. It was discovered that there is a concentration of publications written in Western countries (developed countries). As a result, more research is required in developing countries to achieve the Agenda 2030. The similarity of intellectual structure of authors was discovered through co-citation analysis, with Schaltegger, Cohen, Shepherd, Wagner, and Patzelt being the most co-cited authors in this field.

The systematic literature review of articles resulted in the categorization of articles into five distinct themes: (1) Conceptual and Contextual development (2) The Entrepreneurial Process (3) University and Education (4) Entrepreneurial Ecosystems (5) Sustainable Development Goals. These themes were further broken down into various sub-themes, allowing the reader to gain conceptual knowledge and current research pattern in the field of sustainable entrepreneurship.

When reviewing the papers, an article relating to the born sustainable firms (BSFs) (Knoppen and Knight 2022) was discovered. Through that work, it is known how important it is to deviate from the goal of sustainability for a specific period and focus solely on cash-generating activities so that the firm can achieve its target in the long term. Also, firms should focus on enhancing their dynamic capabilities in order to be adaptable enough to incorporate changes within the enterprise.

As the number of SMEs is anticipated to be approximately 332.99 million worldwide in 2021 (Global SMEs 2021, Statista), we must begin by persuading SMEs to incorporate sustainability into all aspects of their operations since SMEs are better able to detect and capitalize on small market niches, as well as make faster decisions about what green materials to buy and what green products to produce along with providing employment and performing other social activities. As a result, the government should assist SMEs in overcoming critical barriers to investment in green markets by providing the necessary assistance (Silajdžić et al. 2015). According to the literature reviewed, adopting holistic business models can benefit businesses. Hybrid venture business models can help sustainable entrepreneurs achieve multiple long-term goals while also facilitating supply chain exchange relationships (Davies and Chambers 2018; Hahn et al. 2018). A high-performance work system (Kim et al. 2021) should be established, and entrepreneurial orientation should be promoted within the organization, in addition to the establishment of a knowledge management system (Bertello et al. 2022), so that employees are familiar with all of the skills and aptitude for developing new ideas, which would lead to improved organizational performance.

In accordance with the article analysis, it was discovered that the individual's personal background, values and motivations, educational level, attachment to a place, and concern for both the environment and people are some of the orientations that act as the drivers of sustainable entrepreneurship, leading to the identification of opportunities from the problems faced by the community and the environment, and ultimately leading to the establishment of sustainable enterprises. Along with incorporating sustainability into their organizations, entrepreneurs and business owners must also consider the expectations of their stakeholders. Investors should be integrated into organizations and given confidence in the returns through the use of digital technologies and network building. Improving organizational policies, offering employee stock plans, and providing responsible packaging and delivery of goods to customers will contribute to the firm's long-term economic growth (Anbarasan and Sushil 2018; Gregori and Holzmann 2020; Kahupi et al. 2021; Kautonen et al. 2020).

Education for sustainable development should be incorporated as a regular course in almost all fields of university education in order to inculcate the importance of sustainability in younger generations. This, in turn, would encourage businesses to produce sustainable products and deliver services that benefit society and the environment. Efforts should be made toward the expansion of University Spin-Offs (USOs) (Fernández-López et al. 2022) and university-linked programs and initiatives (Nave and Franco 2019; Wagner et al. 2021) that can assist prospective sustainable entrepreneurs in launching their own venture and achieving the goal of regional

development. The analysis discovered that sustainable entrepreneurship, in particular, necessitates ecosystem support (Volkman et al. 2021) in terms of obtaining sufficient funds for starting and expanding the enterprise, accessing new markets, obtaining competent human capital, building networks, adapting culture, and creating wealth. Several studies investigated the role of venture capitalists, crowdfunders, and other sustainable investors who take the risk of investing in risky projects in the hope of benefiting society and the environment. The formation of clusters of businesses of similar nature would also create an ecosystem, which would aid in increasing productivity due to the availability of specialized inputs, information access, and synergies, as well as increasing innovation through collaborative research and competitive aspirations, along with the establishment of new businesses by filling in niche markets and expanding the boundaries of the cluster map. Thus, the development of sustainable entrepreneurial ecosystems would encourage more entrepreneurs to accommodate sustainability into their organizations.

It has also been discovered that sustainable entrepreneurship leads to improved climate performance and value creation in society (Crecente et al. 2021; Kuckertz et al. 2019; Leendertse et al. 2021). The purpose of this paper is to provide a systematic review of the most pertinent articles on sustainable entrepreneurship. The study provides an in-depth look at the commonalities, discrepancies, and shortfalls in these areas. The paper presents several bibliometric analysis to gain a deeper understanding of the main topics, authors, and countries that are currently more involved in sustainable entrepreneurship. Furthermore, five main themes and several sub-themes are presented through SLR, through which scholars working in these fields can gain a general understanding of how sustainable entrepreneurship has grown since the implementation of the SDGs around the world.

30.5 Limitations

The main limitation of our study is that the bibliometric analysis was performed on a relatively small number of documents (194); additionally, bibliographic coupling could have provided the reader with more relevant information. In addition, for our systematic literature review, we only included articles from journals in the A and A* categories on the ABDC journal ranking list. It should not be overlooked that journals in the B and C categories contain a large number of articles on sustainable entrepreneurship that can help the reader understand the nature and scope of the field.

Another aspect to consider is that the articles were discovered through a single search term, “sustainable entrepreneurship”, due to which, again, some important articles might have been omitted. Furthermore, only one database was used to search the documents, and the analysis was limited to articles, excluding books, conferences, and other resources. Other databases and sources can supplement the literature and provide more pertinent information.

30.6 Future Research

Sustainable entrepreneurs connect sustainability and entrepreneurship theory while developing new and innovative ideas from the original discipline to achieve the triple bottom line goal. Among the most recent demands for future research are (1) a more quantitative examination of the phenomenon of sustainable entrepreneurship in developing countries, (2) the need for longitudinal studies to gain a better understanding of the practice of dynamic capabilities, (3) investigating how networking can help environmentally sustainable start-ups and established SMEs overcome market and financial challenges, (4) the role of women in the establishment of sustainable businesses, (5) an investigation into the role of knowledge-intensive entrepreneurial ecosystem in the transition to sustainability, and (6) potential researchers should also focus their attention on the nature and working of purpose-driven entrepreneurship.

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Chapter 31

ESG Investment and Sustainability Reporting: A Systematic Review for Future Research



S. Poornima and B. V. Gopalakrishna

31.1 Introduction

Sustainable finance is an area of study that looks beyond the simple number of risk and return. It looks over the impact of investment, i.e., positive or negative effects on ESG, i.e., environmental, social, and governance factors. Nowadays, sustainability has become a significant issue for firms. However, in recent years there has been a change in the system. Companies are going slowly beyond profit maximization to invest in sustainability actively. The United Nations Global Compact polled 1000 CEOs from across the world in 2013. According to 93% of CEOs, environmental, social, and governance (ESG) concerns are critical to the organization's success (Khan 2022).

Sustainable investing combines social and environmental factors into financial investing decisions. It is a method of deciding whether to include or exclude assets based on their ecological, social, and governance standards. Investment in ESG encourages shifting to a more long-term sustainable economic structure (Losse and Geissdoerfer 2021). The concept of sustainable development is quite popular all over the world. International bodies from across the globe have recommended development action plans such as ESG to construct a framework for human civilization's sustainable development in response to the increasingly significant sustainable development challenges in the environment, society, and the financial market. According to the Principles for Responsible Investment (PRI), responsible investing is the incorporation of environmental, social, and governance (ESG) issues into investment decisions and active ownership. Investors frequently use ESG scores to assess

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a company's commitment to sustainability. The three fundamental components of ESG are the most important aspects to consider during the investment analysis and decision-making process or assessing the sustainable growth of businesses. Additionally, environmental, social, and governance (ESG) elements aid in measuring commercial undertakings' sustainability and positive societal effect (Li et al. 2021). Even credit rating agencies have included ESG factors in their workflow. These rating agencies recently pledged to incorporate ESG factors into the credit rating process by signing the Principles of Responsible Investment (Khan 2022).

Despite receiving much attention from businesses and the investment sector, academic research in sustainable finance is still in its infancy. But, now the literature has been expanding quickly and shifting toward different subjects. Academic research has significantly progressed beyond determining whether firms and investors should be concerned about sustainability and social responsibility to understanding how these issues affect corporate performance, investor returns, financial market activity, and the macroeconomy (Liang and Renneboog 2020). The concept has seen extensive development over the past 17 years since its original presentation in 2004. Coordinated efforts are still being made globally to develop the environment, society, and governance.

As investors are becoming more aware of the significance of sustainable business practices for long-term value creation, there is an increasing interest in Asia for the linkage between environmental, social, and governance-firm value (ESG-FV). Institutional and individual investors are becoming more conscious and supportive of ESG investment. However, in India, the concept of ESG investing is still in its infancy in terms of academic research as well as in integrating ESG considerations into its strategic practices (Sharma et al. 2020). In Fig. 31.1, we can observe that research in India falls behind that of other advanced countries like the UK, USA, and Italy. Due to its enormous population, high population density, poor physical and social infrastructure, political unrest and limited resources, India is experiencing issues in adopting the ESG framework into its operational mechanisms. Additionally, there aren't many opportunities for investors in SRI and ESG funds (Behl et al. 2021; Rajesh 2020).

According to the Global Sustainable Investment Review 2014 study, "In India, impact investing is likely to have an increasing influence on the entire sustainable investment environment". Hence, research in this field is vital in the Indian context. This article aims to evaluate the prior research in the field of ESG. It considers the research in this field using a systematic review methodology to identify and emphasize the need for additional research to set the future research agenda.

The following describes the structure of this paper. The current section provides the study; the second section discusses the research objective of the paper; the third section summarizes the evaluation technique; and the fourth section analyzes the outcomes of this systematic literature review. The paper's final section summarizes the analysis by emphasizing the research issues raised by the literary criticism and recommending an ESG research strategy.

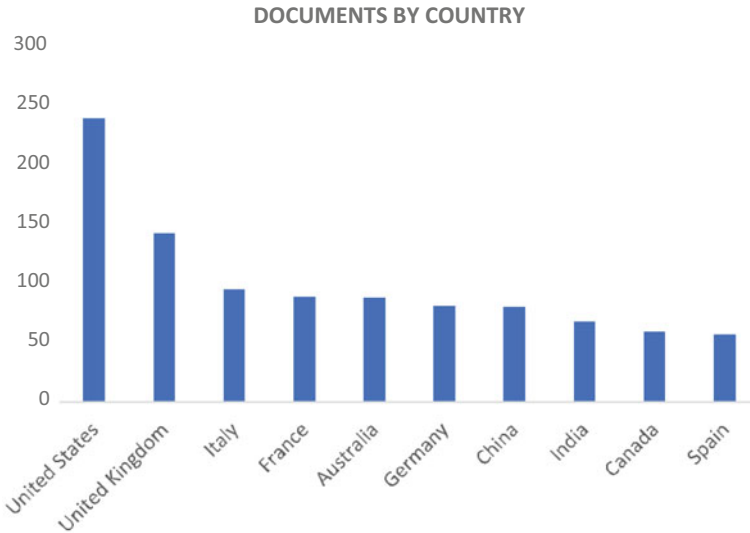


Fig. 31.1 Research in different countries *Source* Scopus results

31.2 Research Objectives

This section discusses the research goals that a systematic review of the literature addresses.

RO 1: To review the present literature and highlight the issues highlighted by the literature.

RO 2: To find research gaps in the literature and to specify possible future research opportunities in the domain of ESG.

To accomplish the goals mentioned above, we performed a systematic review of the literature, a well-established method for gathering data regarding emerging research (Jabbour 2013; Talan and Sharma 2019). The systematic review was based on the publications of (Jabbour 2013; Lage Junior and Godinho Filho 2010; Talan and Sharma 2019) and adapted their methodologies by emphasizing papers from a single source. We reviewed articles on ESG that were published in journals listed in Scopus. The exact search criteria and the papers ultimately chosen for evaluation are displayed in Fig. 31.2.

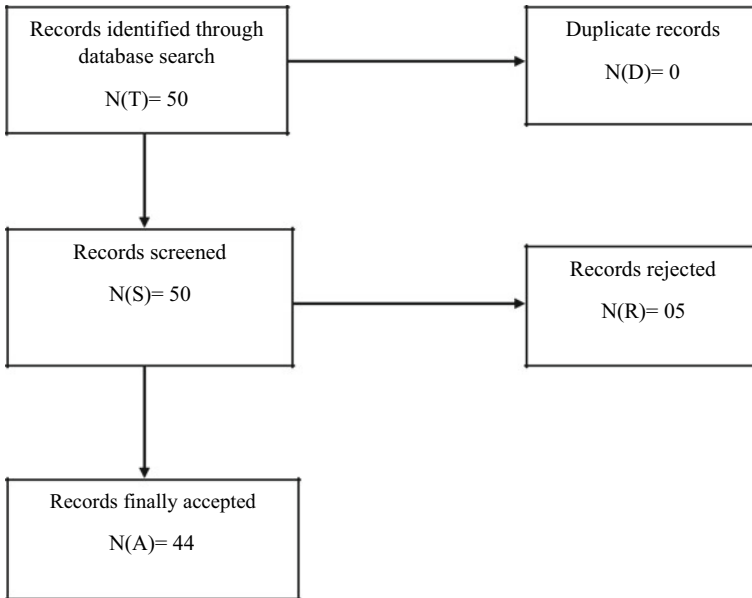


Fig. 31.2 Papers selected for evaluation *Source* Prepared by the author

31.3 Methodology

The research approach followed in this research was motivated by the work of (Jabbour 2013; Lage Junior and Godinho Filho 2010; Talan and Sharma 2019). The following research procedures were carried out throughout the review.

- (1) Conducted a review of the literature on ESG research;
- (2) Created a classification framework for themes;
- (3) Review analysis using TCCM and Thematic analysis;
- (4) Analysis of research gaps and creation of a future research agenda.

The analysis examined the ESG articles published in journals that Scopus indexed.

To maintain the quality and consistency of the articles reviewed for this paper, the research work on ESG published in journals indexed in Scopus was searched. Scopus offers broader coverage of titles and is an authentic and trustworthy tool for conducting review analysis (Khan 2022). Initial screening was done on publications whose titles contained an ESG-related keyword. With these parameters, 50 research publications were discovered in total. No duplicate records were found. Thus, the relevant articles were chosen for the study. The research papers were carefully examined, and out of the 50 articles, 06 articles that were irrelevant to the study were identified and eliminated. The remaining 44 articles were finally selected and reviewed.

31.4 Analysis

31.4.1 TCCM Framework

The TCCM framework is used to emphasize the prior literature and ideas for further study are suggested. The following section discusses the evolution of theory, context, characteristics, and methodology.

31.4.1.1 Theory Development

The literature on sustainable finance includes widely used theories such as Stakeholder Theory (Hasan et al. 2022; Kumar et al. 2021; Sachin and Rajesh 2022), Legitimacy Theory, Signalling Theory (Kumar et al. 2021; Fahad and Nidheesh 2020), Agency Theory (Fahad and Nidheesh 2020; Sharma et al. 2020) and Ecological Modernization Theory (Rajesh and Rajendran 2020). These approaches should be utilized as a foundation for future empirical investigations in sustainable investing and ESG innovation. However, new theoretical lenses might be utilized to explain previously untapped areas, such as how the engagement of stakeholders can provide input on crucial regions of ESG innovation. It is suggested to comprehend how sustainable disclosure affects individual investors' behavior. These two ideas may be examined from different theoretical approaches. Furthermore, various theoretical models may be built to analyze the impact of sustainable investment from multiple industries across India.

31.4.1.2 Context

The advancement of knowledge has emerged from research in ESG investing and disclosure by identifying various vital aspects. However, the literature on this topic is so scattered and heterogeneous that drawing a definite conclusion regarding them is challenging. The dilemma in this domain is the lack of conclusive evidence about how firms perceive and implement ESG. Furthermore, the ESG research is limited to a few selected developed economies (Fig. 31.1). As a result, there is an opportunity to fill this research gap in India.

31.4.1.3 Characteristics

According to the review, ESG research in India is mainly scattered into three topics. Many studies have found a correlation between ESG, CSR (Corporate Social Responsibility), sustainability disclosure, and business value. These sustainability performance indicators are developed based on the businesses' ESG ratings, and company

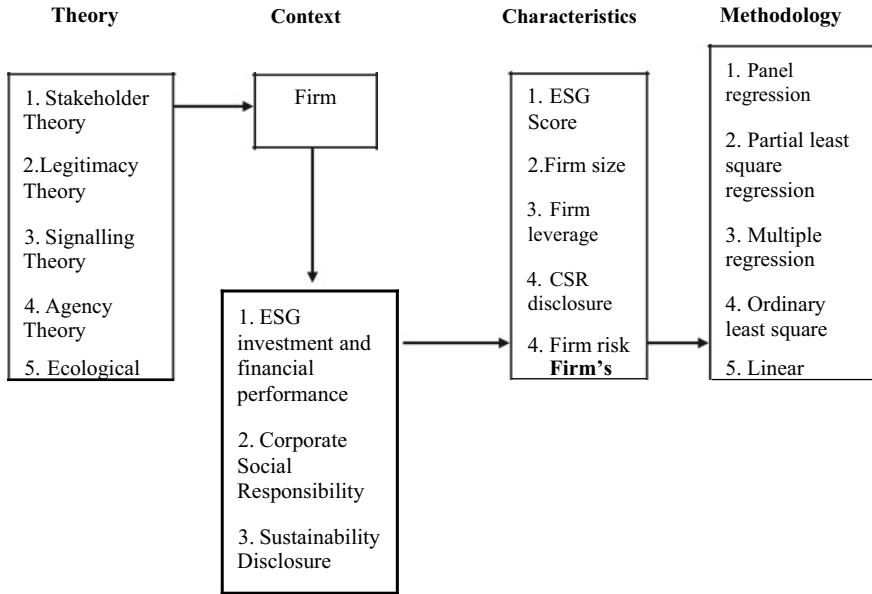


Fig. 31.3 Variables for study *Source* Prepared by the author

value is calculated based on return on asset, return on equity, and return on capital. The study revealed that prior studies used company size, industry type, firm leverage, and firm age as control variables (Fig. 31.3).

31.4.1.4 Methodology

The extensively used methodology includes panel regression, partial least square regression, multiple regression, ordinal least square, linear regression model, EGARCH, CAPM, GMM, and logistic regression. However, future research can also integrate mixed-methods approaches in this study area.

31.4.2 Thematic Analysis

To examine research articles containing components of ESG and sustainable investing, the characterization techniques used by Rezende et al. (2016) and Talan and Sharma (2019) were modified. To ensure the quality of the papers to be examined, Scopus-indexed journals were chosen. The criteria for selecting research papers (shown in Fig. 31.2) were carefully examined in light of the problems raised by the researchers, the breadth and importance of ESG investing and any frameworks or

Table 31.1 Key Themes

ESG		
S. No.	Themes	Description
01	ESG investment and financial performance	With the growing awareness of environmental stability and the socioeconomic development of countries, the importance of sustainable and responsible investment strategies has substantially increased. To improve risk management and to ensure sustainable returns for investors, responsible investment strategies take environmental, social, and governance (ESG) factors into account
02	Corporate social responsibility	Corporate social responsibility (CSR) is a concept that encourages businesses to voluntarily invest time and resources in environmental and social causes in addition to their regular business operations to build goodwill among stakeholders. This study reviews whether businesses and investors should be concerned about sustainability and social responsibility and how these issues affect business performance, investor returns, activity in the financial markets, and the macroeconomy
03	Sustainability disclosure	The reliability of current ESG measurements and the appropriate disclosure of ESG-related information are crucial for investors, managers, and regulators as trillions of dollars are invested based on firms' ESG performance. In this section, the literature on ESG measurement and disclosure is examined

Source Prepared by the author

strategies created for such investments. The data acquired from the publications were divided into three key themes (given in Table 31.1) to determine the research gaps and understand the significance of the ESG approach in sustainable investing.

31.4.2.1 ESG Investment and Financial Performance

The first classification is related to the correlation between ESG and how it affects financial performance. Of 44 selected research articles, 29 papers were related to ESG and financial performance. Growing public awareness of environmental, social, and corporate governance (ESG) issues has led to a change in people's attitudes that has influenced the environment of the asset management business, and they have started to reconsider the impact of their investment on the environment and society as a whole (Aich et al. 2021).

Lengthy and extensive literature is available on the link between ESG activities and firm performance. Due to stakeholders' increased interest in ESG firms and their financial success, ESG evaluation is becoming more pertinent (Shaikh 2021). Most of the studies (Aggarwal and Elembilassery 2018; Aich et al. 2021; Bhaskaran et al. 2020; Bodhanwala and Bodhanwala 2019; Chelawat and Trivedi 2016; Hassan and Roychowdhury 2019; Praseeda 2018; Spulbar et al. 2019; Tripathi and Bhandari 2015) hold that the disclosure, rating, and other actions related to

ESG information have a favorable impact on the firm's performance. The countries which implement the ESG legislation in their policies, using the social development index produced higher benchmarking ESG scores than those that are not implementing (Singhania and Saini 2022) and a significant and favorable impact on financial performance deficit on company ESG performance (DasGupta 2022) was recognized. When we compare the green finance index with the conventional index for causation and spillover, both the indices displayed bidirectional causation, and connectedness between the two sets of indices increased during the COVID-19 pandemic (Sharma et al. 2022). The return from the sustainable index was higher and less volatile than the conventional index (Sudha 2015). Financial performance can be measured using two parameters, i.e., accounting-based and market-based financial performance (Bhaskaran et al. 2020). The relationship between ESG and accounting-based financial performance positively correlates with corporate financial performance (CFP) and each of the individual ESG components. Better ESG disclosure aids in enhancing the CFP, and the environmental impact of good governance drives the investment impact (Aich et al. 2021; Kumar and Firoz 2022). When choosing investment alternatives, individuals are influenced mainly by the security's credit rating and the ESG ratings (Prajapati et al. 2021). Today, listed firms all over the globe are moving away from short-term profit maximization goals to sustainable, long-term environmental, social, and governance (ESG) objectives. Integrating ESG components in management is necessary for corporate sustainability in the true sense (Bhaskaran et al. 2020). While creating the ESG score for firms, the firm's sustainability performance contributes more or less equally to the ESG performance score. This suggests that businesses should prioritize their ESG challenges equally to improve their ESG results. Long-term ESG performance can be economically advantageous to the company (Rajesh and Rajendran 2020); at the same ESG performance significantly lowers the firm's earning management (Bansal et al. 2021; Pathak and Das 2022; Sharma et al. 2019). In the case of India, management score, shareholders score and human rights score are the least essential factor which influences the ESG score (Rajesh 2020); socially responsible investment (SRI) portfolios significantly underperformed and also have relatively less risk (Bodhanwala and Bodhanwala 2020). When there is an inverse relationship between ESG and stock return, Indian investors do not take the ESG ranking into account while investing (Bhattacharya and Sharma 2019; Jyoti and Khanna 2021; Sachin and Rajesh 2022), but during the COVID-19 ESG index return and volatility both were surprisingly unaffected (Singh et al. 2021) and there was no noticeable difference in the performance between sustainable indices and the conventional indices (Jain et al. 2019). Apart from the relationship between ESG and stock return, the connectedness of ESG and the credit rating of the companies also play an essential role. The relationship between governance score and credit rating was both substantial and favorable. Credit quality and market capitalization are directly correlated. ESG substantially influences the credit rating of only small and middle-sized businesses; ESG had no impact on large companies, which already had superior credit ratings. Additionally, credit rating strongly influences the scope of comprehensive ESG reporting and component disclosure (Bhattacharya and Sharma 2019).

31.4.2.2 Corporate Social Responsibility

The second classification discusses the impact of CSR on the companies' sustainable performance. Out of 44 selected research articles, 11 research papers were associated with CSR and sustainability disclosures. In the 1950s, Howard Bowen initiated a discussion on the obligations of business toward society and gave rise to the concept of CSR (Hribar and Yang 2016). In emerging economies like India, there are severe problems with poverty, unemployment, inadequate working conditions and gender inequality. To ensure the business community's involvement in resolving these issues, corporate social responsibility (CSR) spending has been compulsory in India since 2014. In the current business climate, corporate social responsibility (CSR) has acquired a vital role (Sarfranz et al. 2018); by addressing societal needs and issues, a corporate can create social value along with financial benefits for its shareholders and company. Likewise, it increases the financial performance and governance of the corporate too (Bodhanwala and Bodhanwala 2018; Dahiya and Singh 2020; Fahad and Rahman 2020; Rajesh and Rajendran 2020). So, in the current decade, the field of corporate social responsibility (CSR) has rapidly expanded (Mitchell and Netter 1994). Despite their significant risk, companies involved in CSR projects have profited and improved their access to outside financing (Srivastava et al. 2022). Also, their corporate social responsibility disclosures increased their financial performance (Hasan et al. 2022) and one can also predict the firm's ESG performance ratings based on the CSR involvement (Rajesh et al. 2022). CSR involves what cooperations do with their earnings, not how they make them. This can be attained through ESG investment and reporting to achieve the triple bottom objectives, as ESG investing is more concerned about how the firm makes a profit (Mandal and Murthy 2021). It's not that there is only a direct relationship between CSR disclosures and firms' profitability, but also inverse relationship exists between them in an emerging economy like India and also there are no immediate benefits from CSR efforts (Fahad and Busru 2020; Maqbool and Bakr 2019), socially conscious businesses in India incur the higher cost of capital which automatically affects the firm's profitability (Dahiya and Singh 2020).

31.4.2.3 Sustainability Disclosure

The last classification is related to the sustainable investment of the firm, and how its reporting improves the corporate's performance. Out of 44 selected research articles, 04 research papers were related to this segment. Businesses from all over the globe consider corporate sustainability as essential to advancing sustainable development (Kumar et al. 2021). Today, companies use the disclosure of their sustainability report as their primary means of communicating with a diverse group of stakeholders and demonstrating their legitimacy to the public (Kumar et al. 2021; Laplume et al. 2008; Skouloudis et al. 2014). As a result, businesses are increasingly adopting sustainability reporting as a standard form of sustainability disclosure and with time, corporations' sustainability disclosure improved significantly (Carbo

et al. 2014; Kumar et al. 2021). The motive behind sustainable investment is to have a carbon-free economic agenda and to change the mindset of investors from “take, make, consume, waste” to the new standard “preserve, endure, nourish, bequeath” (Firdaus Khan 2021). International investors favor companies that disclose ESG-related information, but domestic investors are less affected by such information (Chauhan and Kumar 2019). Disclosure of this non-financial information positively impacts the business’s financial performance; investors value a company positively if it discloses more non-financial information (Chauhan and Kumar 2018). Additionally, environmental and social performance disclosure significantly improves corporate stability, brand image, and transparency while minimizing information asymmetry issues (Kumar et al. 2021).

31.5 Discussion and Conclusion

The raised acceptance and growth of ESG strategies have created the impression of considerable progress in sustainable investing. But the studies highlighting the importance of ESG investment and non-financial disclosure are minimal, especially in the Indian context. As a result, to address the gap in the literature, this research incorporated a study to assess the critical elements of the research in the field of ESG and sustainability disclosure using the systematic review approach (Delhi 2020; Jemel-Fornetty et al. 2011). This study reviewed 44 research papers related to ESG; they have been classified into three main themes, i.e., ESG investment and financial performance, CSR and sustainability disclosure.

This review analysis outlines the factors influencing firms’ ESG investment and sustainability reporting critically to assess other studies’ findings. It was observed that earlier relevant studies had employed sample periods of 10 years and five years; further, they have extensively incorporated panel regression (Bodhanwala and Bodhanwala 2019; Fahad and Rahman 2020; Hasan et al. 2022; Kumar et al. 2021; Maqbool and Bakr 2019; Shaikh 2021), multiple regression (Bansal et al. 2021; Sachin and Rajesh 2022; Sharma et al. 2020), and CAPM (Bodhanwala and Bodhanwala 2020; Jain et al. 2019; Singh et al. 2021) techniques to analyze their study data. As mentioned earlier, the financial performance of the companies is measured using two indicators, i.e., market and accounting measures, in the literature majority of the studies (Aggarwal and Elembilassery 2018; Chauhan and Kumar 2019; Fahad and Busru 2020; Hassan and Roychowdhury 2019; Jyoti and Khanna 2021; Kumar and Firoz 2022; Sachin and Rajesh 2022; Shaikh 2021) used return on equity (ROE) and Tobin’s Q as market performance indicators and return on assets (ROA) and return on capital were employed as an indicator of accounting performance. Usually, ESG is used as an independent variable whose impact on other dependent variables is measured. But these studies (Fahad and Rahman 2020; Kumar et al. 2021; Sharma et al. 2019, 2020) used ESG as a dependent variable, and the data of ESG scores to measure ESG investments were obtained from the Bloomberg website for the analysis (Bansal et al. 2021; Hasan et al. 2022; Kumar and Firoz 2022; Shaikh 2021;

Srivastava et al. 2022). After reviewing all 44 selected research papers, it was found that there is no appropriate conclusion given on the connectedness of sustainability and firm performance. Few authors (Aggarwal and Elembilassery 2018; Aich et al. 2021; Bhaskaran et al. 2020; Bodhanwala and Bodhanwala 2019; Chelawat and Trivedi 2016; Hassan and Roychowdhury 2019; Praseeda 2018; Spulbar et al. 2019; Tripathi and Bhandari 2015) hold a claim that there is a significant positive correlation between sustainability and firm performance, while others (Bhattacharya and Sharma 2019; Jyoti and Khanna 2021; Sachin and Rajesh 2022) claim that there is a negative or no correlation. As a result of these findings, it has become challenging to conclude these impacts.

CSR is also one of the factors of sustainability. All the studies used ESG scores to measure the business's corporate social responsibilities. It was found that entities engaging in CSR activities significantly improved their financial performance because investors are now concerned not only about their return but also with how they earned it (Bodhanwala and Bodhanwala 2018; Dahiya and Singh 2020; Fahad and Rahman 2020; Rajesh and Rajendran 2020). Investor integrity, ESG investment, and ESG reporting are essential to achieve CSR's triple bottom-line objectives. Still, due to various causes, including political interest, how CSR is understood and executed in India is inappropriate (Mandal and Murthy 2021).

Sustainability is not only about including ESG and CSR in business, but reporting to the general public is equally important. The disclosure of sustainability information is progressively improving in India (Kumar et al. 2021), and such disclosures of the companies are encouraging foreign investors to invest in sustainable development (Chauhan and Kumar 2019) because more disclosure of a company's non-financial information is seen favorably by investors (Chauhan and Kumar 2018).

The research covered in this paper demonstrates how important the ESG framework and its reporting are to long-term investing strategies. ESG investments are also known as sustainable investments, socially responsible investments, ethical investments, and impact investments. However, there is an indication of variance in how corporations and investors adopt ESG initiatives. Business sustainability is considered as the theme of the twenty-first century, which is widely used to address the problems of the environment, society, and governance by combining business objectives with sustainable development.

31.6 Limitation of the Study

The present study is not free from limitations. To begin, the study is limited only to the Indian context. Despite being the most extensive and reliable database, the study's articles were obtained solely from the Scopus index, which makes it challenging to examine the range of ESG investment literature available from other sources. Next is the selection of keywords for the paper search; while searching for the research papers, "ESG" is the only keyword employed, and a few documents might have been missed while applying the filters. The research articles published only in journals are

considered for the study. Conference papers, book chapters, review papers, writing in the press and research other than business, management and accounting, economics, econometrics and finance and social sciences are not taken for the study. So, while excluding these items, there is a chance of omission a few works.

31.7 Future Research Direction

The study examined the chance for future research to fill in the gaps in the existing literature by thoroughly analyzing 44 papers in the area of ESG, with an emphasis on the effectiveness of ESG as a tool of sustainable investing. ESG is one of the most rapidly growing sustainable investment strategies (Talan and Sharma 2019), and there is extensive future scope for this area of finance. Based on the review, a few future research directions identified are; in the literature, it was found that the financial performance of the companies was measured using ROA, ROCE, and ROE as their parameter; future studies can employ earning per share (EPS), dividend per share (DPS), P/E ratio, and return on net worth as a measure of financial performance (Jyoti and Khanna 2021), considering ESG as a dependent variable. Along with that, the behavior of Indian investors toward sustainable investments has not yet been explored. Thus, this could be a new area of study for the future. A wide range of research is available on the impact of ESG on the company's economic performance. Still, limited studies describe how ESG affects dividend policy, capital spending, and operational costs (Matos et al. 2020; Shaikh 2021). Future research in this area can be expanded by examining the mediating and moderating effects of variables such as firm riskiness, cost of capital, etc. Thus, these are the new dimensions for future research.

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Chapter 32

Marketing of Renewable Energy: Emerging Themes and Their Directions Using Interpretive Structural Modeling



Vaibhav Sharma, Diptiman Banerji, and Victor Saha

32.1 Introduction

The optimal utilization of natural resources and ecosystems is addressed as an essential measure to avoid the deterioration of the environment (Arroyo and Carrete 2019). Highlighting the concern of environmental sustainability, the world summit on the environment has defined sustainable development as the collective responsibility of people to uplift the standards of welfare for the environment at a local, national, and global level (Robert et al. 2005). This responsibility includes different activities at different levels, such as reusing goods, recycling the products, reducing energy consumption, and buying renewable energies like green energy (Kollmuss and Agyeman 2002). Considering the responsibility of ‘environment welfare’, energy studies have been on the rise. Various researchers have paid attention to the transition to renewable energy (Kollmuss and Agyeman 2002; Markard et al. 2012; Robert et al. 2005) as it is replenished naturally and has little impact on the environment compared to fossil fuel use. Renewable energy has various kinds; US environmental protection agency (EPA 2018) discussed its types under the umbrella of ‘green power’. They defined renewable energy as solar, wind, geothermal, biogas, and other low-impact hydroelectric products (Arroyo and Carrete 2019). According to the IEA report, renewable energy contributes to 28% of global energy consumption at the cost of coal and gas. The transition to renewable energy is gradually turning into a global demand as most nations, including developing and developed, pledge to reduce the carbon footprints of fossil fuels.

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But, without the initiative of public policy and social marketing, the adoption will remain a desire rather than a demand (EPA 2018; Markard et al. 2012). Eagle et al. (2017) discussed different social marketing strategies to smoothen the transition to renewable energy. Social marketing of renewable energies can generate social acceptance among the public to implement renewable energy technologies and increase their uptake of them. Therefore, various marketing scholars have focused on studying multiple marketing strategies to develop an ecosystem for the successful implementation of renewable energy across the globe and to fulfill the demand for environmental sustainability (Eagle et al. 2017).

Given the prominence of the marketing and renewable energy literature, a thorough and detailed analysis is required to synthesize the holistic frame. Such analysis should demystify the core of intellectual anatomy (Shiau and Dwivedi 2013) of the 'marketing of renewable energy' literature. Although there is the proliferation of research interest pertaining to the marketing of renewable energy, studies gauging the latest emerging themes in the domain at various levels are nascent, and the field appears to be fragmented in bits and pieces (Eagle et al. 2017). With this, the vagueness of adoption factors of renewable energies stemmed from different level is observed. Therefore, this article attempts keyword analysis and Interpretive Structural Modeling technique to decipher the themes and to structure the association among all the leading adoption factors for renewable energies at different levels. Extensive literature review using keyword analysis has unearthed various themes and enablers of renewable energies pertaining to consumer (micro), firm/group (meso), and government (macro) levels. The identified themes in the area enrich the holistic understanding of the literature and direction of the adoption factors presented in the literature at micro-, meso-, and macro-level. The association of the factors guides future research and policy makers to extend the linkage for successful adoption of renewable energies and gain wealth with sustainable ecosystem by making synergy at all the relevant levels. This article answers the following research questions.

RQ 1: What are the emerging themes in marketing and renewable energy?

RQ 2: What is the association among themes and theme-based factors for the adoption of renewable energy?

The remainder of the article is as follows: Sect. 32.2 discusses the methodology, followed by Sect. 32.3 of analysis and findings. Section 32.3 follows Sect. 32.4 of discussion and implications and Sect. 32.5 of conclusions and future research directions.

32.2 Methodology

32.2.1 Study 1

32.2.1.1 Extraction of Themes Using Keyword Analysis

For the literature search, this article has undergone rigorous inclusion and exclusion criteria to arrive at the relevant sample. We have used two keywords one is ‘marketing’ and other is ‘renewable energy’ as the main aim of our study is to decipher the angle of marketing for renewable energy and then to discuss the emerging themes. We have used the SCOPUS database to get our sample, as this database is recommended by various prominent authors in the field (Shree et al. 2021). In the initial database search, we came across 1161 articles, and then we used some filters that included filters of area, journal, document type, and language. We have focused on Business and Management as an area as this paper intends to address the business practitioners, researchers, and policy makers of renewable energy across the globe. In line with this, we have focused on ‘Journal’ articles to maintain the scientific rigor of our research and then limited our search to only those publications which are written in ‘English’ language.

Addressing this rigorous search process, we have obtained the sample of 41 articles and carried out a theme-based review to produce themes and theme-based factors (see Fig. 32.1). We have performed keyword analysis to explain themes as the use of keywords majorly focus on the direction of the research in entirety (Goyal and Kumar 2021). Researchers have rigorously used theme-based reviews to land up the emerging themes in the field and to know where the field is embarking upon (Gupta et al. 2020). Following the extensive review, we have extracted themes at macro-, meso-, and micro-level (see Fig. 32.1).

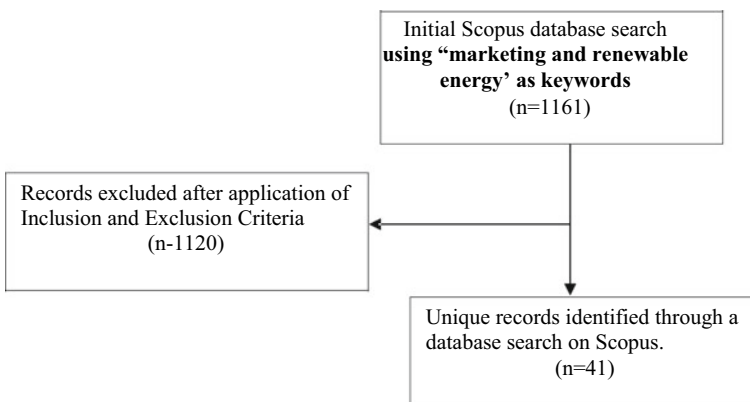


Fig. 32.1 Article selection process

32.2.2 *Study 2*

32.2.2.1 **Interpretive Structural Modeling**

ISM is a learning process based on interaction in which various directly related elements are structured in to a rigorous model. The model demonstrates a system in carefully designed pattern. ISM follows a basic idea of considering expert's opinions based on their knowledge to crumble a complex system in to sub-systems (Elements). ISM model helps researchers to ascertain the directions of different elements and thus reduce the complexity of their associations (Warfield 1974).

Various prominent researchers have used ISM to solve complicated issues of association (Mathiyazhagan et al. 2013). For example, Saxena et al. (1990) have developed direct matrices of objectives, key factors, and activities for conservation of energy in the Indian Cement Industry. Similarly, Sharma et al. (1995) have developed hierarchy of actions required to grab the forthcoming objective of management of waste in India. In the same vein, Ravi et al. (2005) have used ISM to analyze the interaction among the barriers of reverse logistics, and Raj et al. (2008) have used ISM to understand the interaction of various drivers of flexible manufacturing system (FMS). Raj et al. (2008) have found that this methodology is interpretive as the judgment of different groups decides how several elements are related. ISM is structural in nature which is taken from the complex set of variables. Further, they have found that ISM helps to show order and directionality among different elements. Further, Kannan et al. (2009) have used ISM to analyze the interaction of criteria to choose the suppliers of green products who addressed the environmental performance.

With the extensive use of ISM in research, it has some limitations. The association of the elements in ISM always relies on expert's knowledge. Therefore, their biasness might influence the final results. The steps of ISM are shown in Sect. 32.3.2.1.

32.2.2.2 **Data Collection**

ISM methodology follows the use of expert's opinions to develop the contextual association among the elements. We have unearthed ten elements at macro-, meso-, and micro-level. To identify the contextual association, four experts were consulted. Out of four experts, three experts were from academia and one was from renewable energy business. For analyzing the association, we have taken 'leads to' condition under consideration.

32.3 Analysis and Findings

32.3.1 Study 1

We have explored themes based on the keywords used by authors in their research works since the author's keywords are the best demonstrators of synthesizing the research in the right direction with the emerging themes in the research area (Comerio and Strozzi 2019). Using Biblioshiny of R software, the keywords were analyzed to decipher the most prominent themes under the gamut of marketing and 'renewable energy'. Out of 41 research articles, a total of 82 keywords were identified. The keyword 'renewable energy' is the most frequently used keyword, with 15 occurrences; this reflects its use as a 'concept term' in literature. The other frequently used keywords in 41 articles are 'marketing', 'solar energy', 'green marketing', 'public policy marketing', 'direct marketing', 'attitude', 'purchase intention', 'consumer choice/preference', 'environmental consciousness', 'adoption', 'green energy', 'institutional theory', 'social marketing', and 'sustainability'. Based on these keywords, we have extracted three themes, namely '*macro-factors*', '*meso-factors*', and '*micro-factors*'. All these extracted themes follow the approach of 'Institutional Theory' which also came as one of the salient keywords.

Factors at macro-level include government initiatives for transformation of 'renewable energies' and 'public policy marketing' while factors at 'meso'- and 'macro'-level deal with firm's marketing activities and customer related factors like their attitude, intention, and others.

In this section, we have first discussed the interconnection between marketing and renewable energy based on our review and then briefly elaborated all the themes traced from the literature.

32.3.1.1 Literature on Renewable Energy and Marketing

Renewable energy has the potential to modernize and enhance the lives of people owing to its nature of environmental friendliness (Cheah and Low 2022). Research shows that the transition from fossil fuels to renewable energy, such as wind energy, has become a need of the hour for nations as a pledge to be carbon neutral in the future. This has turned the requirement for renewable energy into a global requirement that seeks public policy marketing initiatives to create awareness and ability among consumers (EPA 2018). According to American Marketing Association (AMA 2013), 'marketing creates, communicates, delivers, and exchanges offerings that have value for customers, clients, and society at large'. Mapping the essence of this expression of marketing, various researchers have demonstrated the role of marketing in encouraging renewable energy consumption (Arroyo and Carrete 2019; Bang et al. 2000; Brem et al. 2011; Wisner 1998). Moreover, when consumers

witness the explicit policies of the marketplace for renewable energy consumption, such as luring rewards (income or subsidy through reselling electricity) and some punishments (such as different prices charged on the consumption of fossil fuels as well as renewable energy, like solar energy), then the consumption of renewable energy does not exist as a marginalized consumption instead it relegates to a crucial consumption practice (Cheah and Low 2022).

Drawing upon this, marketers draft public policies to incorporate the benefits of using renewable energy and thus promote the consumption of renewable energy resources (Cheah and Low 2022). Moreover, various theories of consumer behavior have also grounded the consumption of renewable energy and explained different factors deriving consumer to adopt renewable energy resources (Arroyo and Carrete 2019; Cheung et al. 2017).

Considerable research attention has been given to the outcome of the expectancy theory of 'Bandura' emphasizing the social cognitive framework and approach of planned behavior to disentangle the key enablers of green purchasing (Barber et al. 2014; Heffels et al. 2012). The expectancy theory explains that the attitude of consumers toward purchasing green products like green energy or renewable energy depends upon the expectation of consumers from the desired outcome and appeal to consumers. Positive expectancy will always foster the purchase of green products, and negative expectancy will discourage the intention to purchase green products. With expectancy, consumer's self-determined motivations also make them purchase renewable energies (Cheung et al. 2017). They have grounded their research on the model of goal-directed behavior and found that self-determined motivation is a strong predictor of energy-conservation behavior. Other psychological traits like consumer perceptions, external and internal motivations, and values also grabbed attention of research and are found to be significantly related to the consumption of renewable energy technologies (Barber et al. 2014). With the emphasis on consumers' traits, they have discussed the role of these traits in boosting recycling behavior and encouraging the use of renewable energy, such as 'solar energy'.

Following the prominence of consumer's traits impacting consumption of renewable energy technologies, a big part of research has moved forward to the social science perspective to explain the role of social marketing in encouraging the purchase of renewable energy technologies (Eagle et al. 2017). They have used the definition of social marketing, which is coined as a marketing strategy that seeks to develop and integrate marketing concepts with other methods to influence consumer behavior that encourages the 'social good'. In addition the impact of social marketing, research has also evaluated the role of direct marketing of renewable energy and revealed that the cost of direct marketing of renewable energy like biogas heavily depends upon the subsidy provided by the government (Heffels et al. 2012) (Table 32.1).

Table 32.1 Top cited articles in the area of the marketing of renewable energy

References	Count of citations	Focus of research
Bang et al. (2000)	386	Drawing upon theory of reasoned action, this article focused on various traits of consumers including their concern, knowledge, belief, and attitude toward renewable energies
Tsoutsos and Stamboulis (2005)	136	This article discussed the theme of innovation and sustainable diffusion of renewable energy technologies
Fernández-Viñé et al. (2010)	80	This article focused on energy efficiency in small and medium enterprises
Wiser (1998)	66	This article discussed marketing of green power to increase the demand of renewable energies

32.3.1.2 Themes

During keyword analysis, Institutional Theory has come as one of the keywords with other keywords. Institutional theory provides lens to comprehend the social process that emphasizes its multilevel and complex nature. These are macro-, meso- and micro-levels (van Wijk et al. 2019).

Following the notion of Institutional Theory, we have emanated themes on ‘marketing and renewable’ energy at macro-, meso-, and micro-level (see Fig. 32.2).

Macro-factors

Research highlights the need to streamline the distribution of renewable energy projects and supports high public advocacy for their implementation (Mjahed Hammami et al. 2018). Taking this into consideration, various governments bring

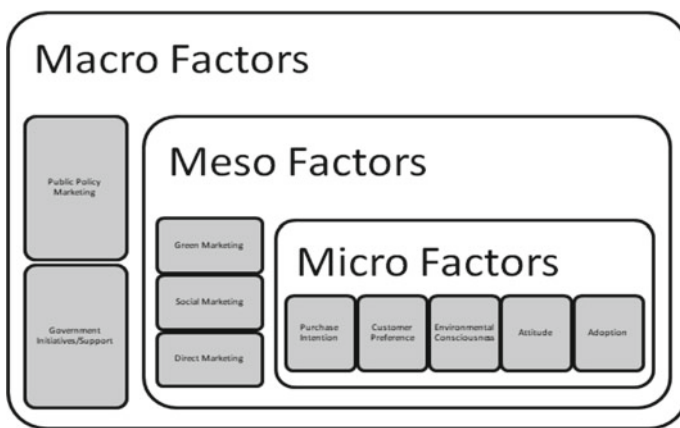


Fig. 32.2 Extracted themes

initiatives and market them. We have conceived all the initiatives of the government (Government Support) and ‘public policy marketing’ under the umbrella of *macro-factors*. Public policy marketing promotes the government’s policy initiatives, services, and programs made in the interest of public (Buurma 2001). Moreover, the institutional theory is used in research studies to explore how initiatives of public policy marketing through institutional narratives and discourses sustain the consumption of renewable energies (Cheah and Low 2022; Gerpott and Mahmudova 2009).

According to the report of Statista, there are various developing and developed countries that have taken various initiatives to embed ‘renewable energies’. The leading countries in installing renewable energy capacity are China (1020 GW), the USA (325 GW), Brazil (160 GW), India (147 GW), Germany (138 GW), Japan (112 GW), Canada (103 GW), France (60 GW), Italy (57 GW), and Russia (56 GW). For example, the developing country like India has launched ‘KUSUM’ Scheme in 2019 to set up of 10,000 MW of decentralized grid connected renewable energy-based power plant (REPP) on the lands where plant growth is sparse. Under this scheme, REPP of 500 KW–2 MW will be set up by individual farmers/group of farmers/cooperatives.

Meso-factors

Meso-factors briefly explain themes related to the activities of group or firm. In the literature, we have come across different marketing activities stemmed from the end of firms to appreciate the adoption of renewable energies except ‘public policy marketing’. These include ‘social marketing’, ‘green marketing’, and ‘direct marketing’ strategies. Social marketing creates the social value of renewable energy consumption and communicates the positive consequences of renewable energy on society (Eagle et al. 2017).

Green marketing reflects the nature of the environmental friendliness of renewable energies. Direct marketing shows its cost-effectiveness as it markets renewable energy-related technologies directly to the public with few and no intermediaries. These marketing activities are vital contributors to motivating consumers for renewable energy consumption (Eagle et al. 2017; Gerpott and Mahmudova 2009; Heffels et al. 2012).

Micro-factors

Research shows that consumers’ act of adopting renewable energies is emotionally charged behavior (Bang et al. 2000; Barber et al. 2014). Consumers’ emotions for renewable energy lead them to demand renewable energy technologies as they perceive renewable energies as an urgent and essential component for the welfare of society and the environment (Mydock et al. 2018). Consumers’ demand is backed by their consciousness, attitude, and intention (Bang et al. 2000; Mydock et al. 2018). Therefore, we have placed all the customer’s related factors including their attitude, intention, preferences, adoption, and environmental consciousness, in *micro-factors* (Fig. 32.3).

Table 32.5 Reachability set, antecedent set, and intersection set

Factors	Reachability set	Antecedent set	Intersection set	Levels
GM (1)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 10	1, 2, 3, 4, 10	6
PPM (2)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 10	1, 2, 3, 4, 10	6
SM (3)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 10	1, 2, 3, 4, 10	6
DM (4)	1, 2, 3, 4, 5, 6, 7, 8, 9	1, 2, 3, 4, 10	1, 2, 3, 4	6
Adoption (5)	5	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	5	1
EC (6)	5, 6, 7, 8, 9	1, 2, 3, 4, 6, 10	6	5
CP (7)	5, 7, 8, 9	1, 2, 3, 4, 6, 7, 10	7	4
Intention (8)	5, 8	1, 2, 3, 4, 6, 7, 8, 9, 10	8	2
Attitude (9)	5, 8, 9	1, 2, 3, 4, 6, 7, 9, 10	9	3
GS (10)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 10	1, 2, 3, 10	7

Step 4. In Step 4, authors have executed an iterative process of partitioning of elements on the basis of elements’ influence. Set of reachability, antecedent, and intersection was developed. Reachability set deals with all the elements that get influenced by the influencers. On the other hand, the antecedent set consists of all the influencers. Based on the reachability set and antecedent set, the intersection set (common set of antecedent and reachability) was developed. Furthermore, the process of identifying the levels had taken place in which common set between reachability and intersection set was identified. The first common set between reachability and intersection was considered as the top level element of hierarchy. Post this, the identified levels were kept separated, and the level partitioning was continued until all the levels were identified.

Table 32.5 shows all the elements with their reachability set, antecedent set, and intersection set.

Step 5. Based on the above levels extracting from the analysis, the structural model was developed (see Fig. 32.4).

32.4 Discussion and Implication

Study 1 demonstrates the various themes and all the elements under each theme using ‘keyword analysis’. These themes are complete snapshot of all the stakeholders required to reach the destination of adoption of renewable energies. Moreover, in study 2, Fig. 32.4 clearly shows the interdependence of all the associated elements stemmed from macro-level to micro-level. The analysis using ISM is completely consistent with the literature of marketing and renewable energies. Macro-level elements including government support and public policy marketing are the prerequisite to make customers adopt the renewable energies. This analysis

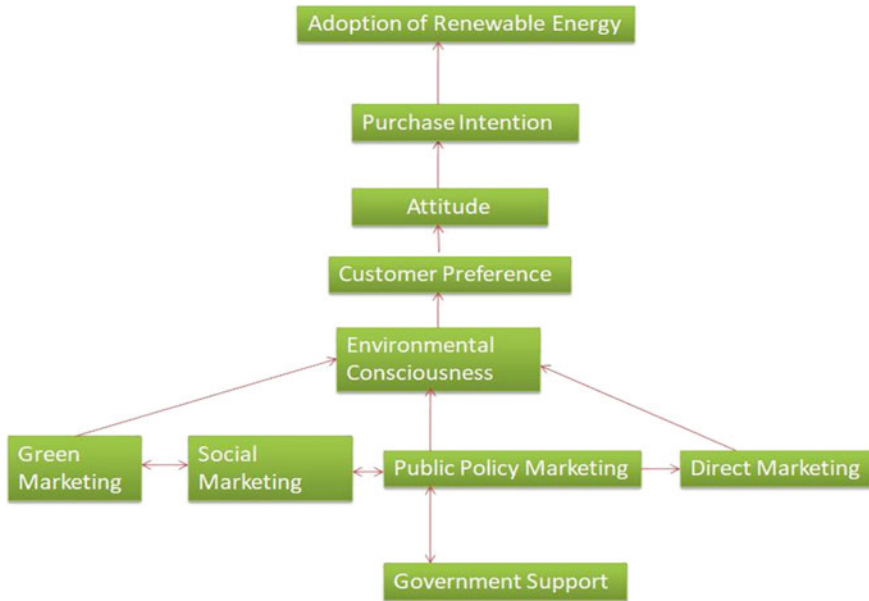


Fig. 32.4 Interpretive structural modeling-based model

emphasizes government to rigorously focus on initiatives for installation of renewable energy. Further, it shows that without marketing of the initiatives and policies, the gap between intention and behavior will become more dominating. Hence, policy makers have to understand each steps of the hierarchy for the adoption of renewable energies. This article shows that all the marketing activities of firms and public policy marketing positively lead to environmental consciousness and this further impacts customer preference. Customer's preferences can further lead to adoption through impacting customer's attitude and intention positively. Our results provide avenue for policy makers to consider all hierarchical elements in order to achieve a reasonable return on government renewable energy initiatives while creating a sustainable ecosystem.

32.5 Conclusion, Limitations and Future Research Directions

Our study has discussed the role-play of marketing in encouraging the adoption behavior of renewable energies, like solar energy, wind energy, and biogas. This study also unearths the emerging themes in the area and calls for future research to capture them in their study to explore the field further. While reviewing the literature, we have found that marketing can be a cutting-edge solution for motivating consumers

to consume renewable energies. Mapping each theme of marketing and renewable energy, our article finds that some marketing activities like ‘social marketing’, ‘public policy marketing’ are required to develop social acceptance for renewable energy consumption. Further, future research should focus on other approaches to marketing, like the Point of Sales (PoS) approach for increasing the sale of renewable energy. The PoS approach has the potential to slow down the gap between attitude and behavior of consumers as consumers’ attitudes can easily turn into action by witnessing the product at eye level. Further, we have found a dearth of research in which all kinds of renewable energies have been studied on single dice. Future research should study all kinds of renewable energy and focus on the differences because consumers’ attitudes may differ toward different kinds of renewable energy.

Future research should also consider contemporary theories to study the role of marketing on renewable energy, as the theories used in the reviewed articles are quite old and are limited in their context. Despite the importance of energy to society, very little is discussed about the perception of the public. Future research should study the consumer’s perceptions of government policies for encouraging the consumption of renewable energy. Furthermore, we also infer that technology has made human life easier and also contributed to strengthening renewable energies. And, this may result in the overconsumption of renewable energies, which raises a challenge to sustainable consumption. Future research is required to conduct a study highlighting the balanced use of technologies for renewable energy.

Moreover, our article enriches the understanding the directions of each theme-based elements which will guide future researchers to know the depending and driving power of each element of renewable energies. Our article has some limitations. First, we have followed only one database to extract the sample on ‘marketing and renewable energy’. Future study should add other database to incorporate more scientific rigor. With this, ISM also struggles with limitation as the association of the elements in ISM always relies on expert’s knowledge. Therefore, expert’s biasness might influence the final results of the analysis (Kannan et al. 2009). Our study has collected data from three academicians teaching marketing and one practitioners working in the energy sector. Our study has used small sample size. Future study can consult more experts to check the difference.

ISM-Based Questionnaire

<i>p</i> (Row)	<i>q</i> (Columns)									
	GS	Attitude	Intention	CP	EC	Adoption	DM	SM	PPM	GM
GM										
PPM										
SM										
DM										
Adoption										
EC										
CP										
Intention										
Attitude										
GS										

Notes Dear Experts, Please fill this questionnaire based on the above information given. Cells in yellow colors are rows and the green ones are columns. What do you think what lead what. For instance if you think that government support leads to green marketing then denote it by ‘A’ (*q* will lead *p*)

Please follow the following notions:

V: Variable ‘*p*’ will lead to variable ‘*q*’.

A: Variable ‘*q*’ will lead to variable ‘*p*’.

X: Variables ‘*p*’ and ‘*q*’ will lead to each other.

O: Variables ‘*p*’ and ‘*q*’ are not related.

The following is the full form of the acronyms used in the given questionnaire.

GM: green marketing, *DM*: direct marketing, *SM*: social marketing, *PPM*: public policy marketing, *CP*: customer preference.

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Chapter 33

Community Participation: A Windfall for Corporate Social Responsibility Implementation in Developing Countries



Anup Raj

33.1 Introduction

Community participation is often considered to be an important aspect of corporate social responsibility (CSR). CSR refers to the ethical principles and policies that guide a company's decisions and actions with regard to its social, environmental, and economic impacts. Community participation involves engaging and collaborating with members of the communities in which a company operates, in order to address social and environmental issues that are important to those communities.

By actively seeking input and involvement from community members, companies can better understand the needs and concerns of the communities in which they operate and can develop more effective and sustainable CSR initiatives that address those needs. In addition, involving community members in the planning and implementation of CSR initiatives can help to build trust and credibility with local stakeholders and can also help to ensure that the initiatives are aligned with the values and priorities of the community.

Overall, community participation can be an important component of a company's CSR efforts, as it helps to ensure that the company's actions are responsive to the needs and concerns of the communities in which it operates and that they are aligned with the company's ethical principles and values.

Implementation of corporate social responsibility (CSR) for community development (CD) in developing countries has recently drawn pronounced attention among researchers (Acharya and Patnaik 2018; Idemudia and Osayande 2018). However, CSR's role in community development is often unobtrusive. For example, studies suggest that community and other stakeholders view CSR as a greenwashing mechanism not aligned to national and community development-focused agenda that cannot contribute to long-term community development (Apronti 2017).

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Yet, there are a growing number of evidence of corporates working with local communities to foster engagement with local community issues (Jamali and Karam 2018; Raj et al. 2019; Lievens 2019). Recent studies also indicate that communities do not easily participate in CSR program implementation if the program is centrally administered by the companies following a standard protocol of CSR planning, implementation, control, and evaluation (Hariyanto et al. 2018). Such a top-to-bottom CSR implementation approach is generally guided by corporate self-interest and may alienate the community in the long run.

CSR assumes more importance in sectors that are often questioned for environmental degradation, exploiting the workforce, and polluting the environment (Banks, et al. 2016). In developing countries, the ‘agribusiness sector’ (primarily comprising chemical fertilizers, pesticides, agricultural commodity, agricultural machinery, food, and herbal products companies) is such a sector that often faces community backlash for environmentally and socially unsound business practices and remains under public scrutiny. For this reason, we choose the Indian agribusiness sector as a context for this study.

Using existing scholarship on ‘stakeholder theory’ and ‘participatory rural appraisal (PRA)’, we investigate to understand how some large Indian agribusiness firms effectively implement CSR programs at the community level? We use multiple case designs and an inductive thematic analysis of 28 managers to develop our argument.

The study develops an empirical framework of CSR implementation through community participation in developing countries. Second, it highlights the role of the ‘local context and culture’ in CSR implementation. Thirdly, it reveals some key barriers being faced by managers in implementing CSR. Finally, it offers suggestions to improve the effectiveness of CSR implementation at the community level. These contributions to CSR knowledge are not only significant but also provide a solid foundation for future research in developing countries.

33.2 Literature Review

Ironically CSR implementation literature is dominated by the top-down approach of CSR implementation. Lakin and Scheubel (2017) contend that there is mounting pressure on firms to understand the community involvement in CSR implementation better because firms do not know how can they find out what is effective and what people will appreciate for?

Stakeholder theory is a framework for understanding and analyzing the relationships between a company and its various stakeholders, which can include shareholders, employees, customers, suppliers, community members, and others. According to stakeholder theory, a company has a responsibility to balance the interests of all of its stakeholders, rather than just focusing on maximizing profits for its shareholder (Freeman 1984).

One way to apply stakeholder theory to understanding community participation in corporate social responsibility (CSR) is to consider the various stakeholders who are impacted by the company's operations and CSR initiatives. For example, a company that operates in a particular community may have an impact on the local environment, on the well-being of community members, and on the economic development of the area. By engaging with community members and seeking their input on CSR initiatives, the company can better understand the concerns and priorities of these stakeholders and can take their interests into account when making decisions and developing policies.

In addition, involving community members in the planning and implementation of CSR initiatives can help to build trust and credibility with local stakeholders and can also help to ensure that the initiatives are aligned with the values and priorities of the community. This can be beneficial for the company, as it can help to build goodwill and improve the company's reputation within the community. By considering the interests of all of its stakeholders, including community members, a company can better align its CSR efforts with its ethical principles and values and can better fulfill its responsibilities as a corporate citizen.

Some studies use the stakeholder approach and concentrate on company and non-profit collaborations as a means of implementing corporate social responsibility (Seitanidi and Crane 2009). They offer a tried-and-true model that draws attention to management problems throughout partnership implementation. They do not, however, pay particular attention to community partnerships or the implementation of the three chronological stages of partnerships—formation, implementation, and outcomes (Selsky and Parker 2005).

There has also been some more research done. Cramer (2005) conceptualizes six non-sequential CSR implementation tasks using a stakeholder approach. Even though Cramer underlined the value of engaging in dialogue with stakeholders, the model is still ambiguous regarding their participation in the process of organizational CSR growth. A process model of organizational sense-making is put forth in other works by Basu and Palazzo (2008). It explains how managers reason for their primary stakeholders and the general public. The existing CSR literature though extensively uses the stakeholder approach to describe CSR implementation but falls short of identifying 'community' as a potential key stakeholder to affect the mechanism of CSR implementation. A participatory approach should be used to become familiar with and understand the situation of different stakeholders (Bagnol 2009).

Participatory research appraisal (PRA) is a research method that involves actively engaging and collaborating with community members in the research process (Chambers 1994). PRA can be used to gather data and information about the needs, concerns, and priorities of community members and can be an effective way for companies to better understand the social and environmental impacts of their operations at the community level.

One way that participatory research appraisal can be used in implementing corporate social responsibility (CSR) at the community level is by involving community members in the planning and design of CSR initiatives. For example, a company might use PRA techniques such as focus groups, interviews, or surveys to gather

input from community members about the issues that are most important to them and to understand how the company's operations are affecting the community. This information can be used to inform the development of CSR initiatives that are more responsive to the needs and concerns of the community.

In addition, PRA can be used to evaluate the effectiveness of CSR initiatives at the community level. By involving community members in the evaluation process, companies can gain valuable insights into the impact of their initiatives and can make adjustments as needed to ensure that they are meeting the needs of the community.

Overall, participatory research appraisal can be a useful tool for companies looking to implement CSR at the community level, as it helps to ensure that the company's actions are responsive to the needs and concerns of the community and that they are aligned with the company's ethical principles and values.

33.3 Methodology

This study focuses on uncovering the process of effective community-centric CSR implementation in a developing country context. For this purpose, we use a multiple case approach. Using multiple case study research in corporate social responsibility (CSR) can have several benefits. Case study research involves in-depth analysis of a specific case or cases in order to understand a particular phenomenon (Eisenhardt 1989). By using multiple case studies, researchers can compare and contrast the different cases in order to identify common themes and patterns and to gain a more nuanced understanding of the phenomenon under study.

One benefit of using multiple case studies in CSR research is that it allows researchers to examine a variety of different situations and contexts, which can provide a more comprehensive and diverse perspective on the topic. This can be particularly useful in the field of CSR, as the social and environmental impacts of a company's operations can vary widely depending on the specific context in which the company is operating.

Another benefit of using multiple case studies is that it allows researchers to triangulate their findings, which can increase the validity and reliability of the research. By examining multiple cases, researchers can cross-check their findings and ensure that they are not relying on a single perspective or source of data.

Overall, using multiple case study research in CSR can help researchers to gain a deeper and more nuanced understanding of the issues and challenges involved in implementing CSR initiatives and can provide valuable insights for practitioners and policymakers working in this field.

We draw our cases from the Indian agribusiness sector as most of the developing countries have agrarian economy and agribusiness is one of the most important sectors for these countries.

We use qualitative data and conducted semi-structured interviews with 28 company executives from four large-sized agribusiness firms in India.

33.4 Data Analysis and Findings

We used Nvivo 10 software that helped us to identify important themes/subthemes by considering the number of nodes corresponding to each of the identified themes.

The following themes and subthemes emerged out of content analysis that has been described below:

1. Barriers to CSR

According to the content analysis, there are two major groups into which the obstacles to CSR implementation can be divided: operational hurdles for the company and community barriers.

a. Operational Barriers for Firms

The investigation discloses that one of the important barriers to CSR implementation is ‘day-to-day operational problems of the firm’. Under this theme, the following subthemes have emerged:

(i) *Lack of Planning of CSR Activities*

The evidence suggests that most of the CSR activities are done on ad hoc basis. Secondly, the *need assessment of the community requirement is poorly designed* resulting in the misplaced prioritization of CSR activities. For instance, when a herbal product Firm ‘B’ wanted to push for vermicompost activities as a part of their CSR program, one manager quotes the community refused the proposal stating that their current priority is something else. They [community] said that currently few girls in the village are attaining the marriageable age. So they wanted to have a ‘stitching and tailoring center’ as part of CSR activities which could impart the girls’ certain skills before their marriage.

(ii) *Lack of Resources*

In line with previous studies, we find that shortage of resources poses a challenge to implement CSR programs.

(iii) *CSR Department is Less Valued*

Unexpectedly, it turns out that CSR departments typically receive less attention from top management than other revenue-oriented departments, as one manager quipped, ‘We are paid less than other departments’.

b. Barriers from the Local Community

The evidence indicates that community pressure on firms exists in different forms. The most evident one is the resistance to change and adopt new practices.

In addition, the study highlights that there are several other barriers that can make it challenging for companies to implement corporate social responsibility (CSR) initiatives in developing countries. Some of these barriers include:

Weak governance and regulation: There may be a lack of strong governance structures or regulatory frameworks to support CSR initiatives. This can make it difficult for firms to implement such initiatives in an effective and sustainable manner.

Cultural and language barriers: Firms operating in developing countries may face cultural and language barriers that can make it difficult to communicate with and engage with local communities.

Limited access to information: Firms may have limited access to information about the social and environmental impacts of their operations in developing countries, which can make it difficult to identify and address potential issues.

Limited stakeholder engagement: In some cases, there may be limited opportunities for companies to engage with local stakeholders, such as community members, NGOs, or local governments, which can make it difficult to develop and implement effective CSR initiatives.

Overall, these barriers can make it challenging for companies to effectively implement CSR initiatives in developing countries and can require companies to be creative and adaptable in order to overcome them.

2. CSR Implementation Process

Under this main theme, following four subthemes have emerged which are described below:

(a) *Community Engagement*

Most of the CSR projects of agribusiness firms are implemented for the benefit. We explored—what managers mean by the use of the term ‘community’. This term also featured the maximum number of times (236) during interviews. The responses suggest that ‘community’ constitutes a comprehensive set of individuals who are impacted by the firm’s CSR initiative.

The second challenge for CSR implementing firms is to ‘identifying potential beneficiaries’ from the CSR program. Sometimes, due to budget or other constraints, a firm may not be in a position to offer benefit to all sections of the community and may like to focus on, say, the utmost unfavorable section of the population. This may result in alienating one faction of the community with other and tempting local political outfits to get involved in it further complicating CSR implementation.

At times, the firm is compelled to enlarge the measure of CSR activities to benefit a greater section of the population which in turn leads to an escalation in CSR expenditure. The data also reveal that sometimes firms want to push their own CSR agenda by focusing on implementing certain specific types of CSR activities. For instance, the head of CSR of company ‘B’ describes how their program for establishing vermin composting units and launching mobile health

services as CSR activities took place. Initially, a firm would face resistance in insisting on its agenda.

(b) **Participation**

The content analysis reveals that for successful CSR implementation, ‘participation of the community in CSR project’ is important and strengthens the impression that community participation is vital in ensuring the success for CSR projects (Cook 1994). Head of CSR of Firm, ‘A’ informs: *We start with PRA.*

PRA is participating and endowing to the community considering that strangers act merely as a facilitator and enable the communities to participate in understanding a local issue and resolving them. At times, a PRA that begins as a need assessment study gradually gets converted into strategic planning, analysis, action, participatory monitoring, and evaluation of a CSR project implying that PRA can also be used in other stages of CSR implementation.

The fact that funders attempt to include the local population as partners in the implementation of CSR projects is one of the intriguing aspects of CSR in developing nations.

The results emphasize that ‘community participation’ is a logical next step of ‘community engagement’ and is critical for successful CSR implementation for community development. Firms encourage the community to participate in CSR programs through finance, land, labor, or other resources to bring ownership of the CSR intervention.

(c) **Ownership**

The content analysis identifies ‘ownership’ as another important theme that is the result of engagement and participation. According to the evidence, participation and financial support ensure that the community begins to take ownership of the project in terms of its management, upkeep, and safety.

The community will take ownership of the CSR project if it makes a financial contribution. Consider an example of a CSR project involving fixing solar panels in a village. Here, the community may contribute a free piece of land or partial finance. Later on, the responsibility of operating and maintaining the solar panel can be transferred to the community, and subsequently, it can be handed over to them (community) resulting in the *ownership* of the asset. Thus, it can be concluded that the community’s financial and other resource contribution is a crucial component of ‘community participation’ and that it serves as a bridge between ‘participation’ and ‘ownership’.

(d) **Feedback**

The content analysis reveals the fourth theme of getting ‘feedback’ from the community after the CSR program has been implemented for evaluating the impact of CSR. The feedback could be collected through an internal mechanism or involving external players or both.

Fig. 33.1 CSR implementation process in developing countries



The result also points out toward difficulty in measuring CSR. Firms employ tailor-made approaches including surveys, feedback sessions, qualitative and quantitative reports, etc., prepared by internal teams and third parties. These feedback and measurement studies help the firms in taking decisions regarding the future direction of CSR activities. This may include modifying, continuing, or closing the CSR activity. Thus, the content analysis reveals that firms in a developing country adopt a non-standard mechanism for CSR impact measurement.

This study posits that the process of CSR implementation through community participation in a developing country occurs in cyclic sequential stages as *Community Engagement* → *Community Participation* → *Community Ownership* → *Community Feedback*.

This process of the implementation of CSR is illustrated in Fig. 33.1.

33.5 Discussion and Conclusion

This paper attempts to respond to the calls of the scholar who emphasizes the need of investigating the micro-organizational dynamics in CSR implementation and more specifically from the community participation perspective (Lindgreen et al. 2009; Muthuri 2012). This study illustrates that in developing countries firms usually adopt a participatory approach of the community to effectively implement CSR. This is because in developing country the community's need takes precedence over the

company's interest, and hence, participatory rural appraisal (PRA) is of paramount importance. It is evident that in sectors like agribusiness local community is a prime stakeholder and CSR initiatives that have been preceded by PRA delineating prior need assessment of the community are more successful.

This study reveals that there could be several ways in which firms can implement corporate social responsibility (CSR) initiatives in developing countries. For example, firms may choose to support community development projects that address social and environmental issues that are important to local communities. This can include initiatives such as education and training programs, infrastructure development, or environmental protection efforts. Firms may also choose to partner with local organizations, such as NGOs or community groups, in order to implement CSR initiatives in developing countries. This can help to ensure that the initiatives are aligned with local needs and priorities and that they are sustainable over the long term. Sometimes, firms may also encourage their employees to get involved in CSR initiatives in developing countries, either through volunteering or by participating in company-supported projects. This can help to build relationships with local communities and to create a sense of ownership and commitment among employees. Finally, firms may choose to work with their suppliers in developing countries to improve working conditions, reduce environmental impacts, and support local communities. Thus, there could be many different approaches that firms can take to implement CSR initiatives in developing countries, and the most effective approach will depend on the specific context and needs of the community in which the company is operating.

In India, the Companies Act of 2013 requires certain companies to undertake corporate social responsibility (CSR) activities. Specifically, companies with net profits of at least INR 5 crore (approximately USD 675,000) in a fiscal year, or with net worth of at least INR 500 crore (approximately USD 67.5 million) or with annual turnover of at least INR 1000 crore (approximately USD 135 million), are required to spend at least 2% of their average net profits for the immediately preceding three years on CSR activities.

This requirement can help to encourage companies to implement CSR initiatives in India, as it provides a legal framework for such initiatives and sets clear expectations for companies to contribute to social and environmental projects. In addition, the Companies Act requires companies to report on their CSR activities and spend, which can help to increase transparency and accountability around these initiatives.

Overall, the CSR law in India can be a useful tool for promoting and supporting CSR initiatives in the country, as it provides a clear framework for companies to follow and helps to ensure that such initiatives are implemented in a consistent and transparent manner.

A typical characteristic of developing countries evolving from this study is through CSR corporates which are more interested to serve the immediate community of direct beneficiaries who are located in the vicinity of their manufacturing plant or premise instead of serving the poor in the remote locality due to infrastructural issues such as the inaccessible road to the remote locality, lack of transport system, electricity and safety and security issues. It could also be in the anticipation of receiving goodwill and support from the local community for the smooth functioning of their manufacturing unit. While the CSR laws generally have a guideline regarding the themes of CSR (viz. poverty, gender, agriculture, women empowerment, climate change, sustainability, etc.) that should be pursued for developmental purposes, it does not provide any guideline regarding location or catchment area that firms should be considering for CSR implementation. It would certainly help in addressing the issue of regional imbalances, both social and economic. The finding of this study probably reinforces these arguments and recommends that in the new CSR law, the government should also be including the guidelines regarding catchment areas to be served during community-oriented CSR programs. Another result of this research is that it supports those who believe that by restricting what may be classified as CSR activities, the new CSR regulation has corrupted the fundamental spirit and essence of CSR.

Finally, this research indicates that community participation in corporate social responsibility (CSR) initiatives can be linked to sustainability in several ways. By actively engaging and collaborating with members of the community, companies can better understand the needs and concerns of the community and can develop CSR initiatives that are more responsive to those needs. This can help to ensure that the initiatives are aligned with the values and priorities of the community and are more likely to be accepted and supported by local stakeholders.

In addition, involving community members in the planning and implementation of CSR initiatives can help to build trust and credibility with local stakeholders, which can be important for the long-term success of the initiatives. This can be especially important in developing countries, where there may be a lack of trust in corporate actors and where it is important to build strong relationships with local communities.

Overall, community participation in CSR can be an important factor in ensuring that such initiatives are sustainable over the long term. By involving community members in the process, companies can better understand the needs and concerns of the community and can develop initiatives that are more responsive to those needs, which can help to ensure that the initiatives are accepted and supported by local stakeholders and are more likely to be successful in the long run.

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Chapter 34

Establishing a Rural Adolescent Mentoring Programme: A Case of Parivartan



Upasna A. Agarwal, Nikhil K. Mehta , Vivekanand B. Khanapuri, and Priyanka Mane

34.1 Prolegomena

As the nation's development rests on her younger generations, Prime Minister Modi urged the Indian youth to dedicate the next 25 years to the nation's development (ANI 2022). As the heart of India resides in her villages, rural transformation through the National Education Policy 2020 would support rural development in India. It is the first policy of its kind that addresses several developmental imperatives aligning with SDG-4 (NEP 2020). It is expected that India shall reap its benefits by 2040. Learning these imperatives could help India redefine the meaning of her worthiness, wealth, righteousness, and happiness. In this pursuance, it is significant that younger adolescent generations can be mentored in the right direction. Given the context, a popular autonomous education institute initiated a rural mentorship programme to support rural adolescent individuals to develop their personalities, enhance life skills, and learn basic human values and core life skills. This article described an exploratory single case study of the Parivartan programme, narrating the journey of creating the mentorship programme and how various challenges were encountered.

Parivartan is a Hindi word that means change.

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34.2 Mentoring for Rural Adolescent Individuals in India

Given the changing learning and work environment, Mullen and Klimaitis (2021) analyzed the literature on mentoring between 1983 and 2019 and explained that the meaning of mentoring has changed over the years. The traditional definition of mentoring rests on its developmental-oriented relationship between mentors and protégés (Mullen and Klimaitis 2021). The role of mentors remains in guiding, advising, counselling, and providing feedback and support to their protégé so that the protégé meets the demands of the situation. Typically mentoring programmes are aimed at physical, social, emotional, psychological, cognitive, competency, and identity development.

Guarded by local values and ethos, adolescents in India feel challenged in aligning themselves to meet social and parental expectations (Breiner et al. 2021). As a result, they experience various difficulties, e.g. poor interpretations of self-read internet content, lack of accurate knowledge and information, lack of awareness of physical and psychological body changes, lack of health education, unhealthy food habits, lack of sexual awareness, confusion on various career fields, absence of proper guidance, lack of skills, and insufficient support services where they can work on their confusion (Sivagurunathan et al. 2015). McKinsey's (2019) report suggested that an average Indian spends around 17 h weekly on the internet. Excessive internet use causes work neglect, procrastination, anticipation, lack of control, poor social life, virtual living and internet addiction.

A review of SCOPUS (2022–1995) with keywords “mentoring programme” and “adolescence” yielded 51 studies, among which 17 studies were related to mental and physical health, 24 programmes were related to social causes, and 09 programmes had both social and medical base provisioning psychoeducational, growth, support, and counselling groups. The count of Indian studies was restricted to eight only. Various aspects of mentoring have emerged so far:

- Sexual health (Waidler et al. 2022; Uengwongsapat 2020; Akers et al. 2021; Bonar et al. 2021; Ozler et al. 2020; Austrian et al. 2020; Norton et al. 2017; Kalra et al. 2022; Koon et al. 2020; Das et al. 2017; Bradley et al. 2017).
- Disabilities (Anastopoulos and King 2015; Cassiani et al. 2020; Lindsay et al. 2018; Vail et al. 2018; Mehrotra et al. 2018; Vyas et al. 2017).
- Addiction and rehabilitation (Haug et al. 2020).
- Robot making (Manikutty et al. 2020).
- Budding entrepreneurship (Thiru et al. 2015).
- Life skills, health education program (Tiwari et al. 2020; Rekha and Ganesh 2012).
- Soft skills (Gundala et al. 2019).
- Augment youth well-being (Higley et al. 2016).

Mentoring programmes, interventions, and facilitations comprised

- Technology facilitation for under-served communities (Shukla and Saha 2021; Kalra et al. 2022; Haug et al. 2020; Manikutty et al. 2020; Gundala et al. 2019).
- Religious perspective (Perske 2003).

- Social, collaborative support intervention (Anastopoulos and King 2015; Austrian et al. 2020; Tiwari et al. 2020).
- Sports (Cannon and Carr 2020; Berlin et al. 2007) to mentor.

These studies typically targeted nurses, healthcare professionals, administrators, social workers, teachers, social entrepreneurs, senior and experienced individuals mentoring undergraduate students, vulnerable students, underprivileged youth, and individuals supported or non-supported by specific agencies. Researchers have demonstrated that a well-designed adolescent mentoring programme positively impacts social, behavioural, academic, emotional, or psychological domains (DuBois and Karcher 2014). For example, Raposa et al. (2019) conducted a meta-analysis to study the effect of 70 youth mentoring programmes and found a statistically significant impact of mentoring programs across all youth outcomes. Similarly, van Dam et al. (2021) found that youth-initiated programs significantly and positively influence academic and vocational functioning, social and emotional development, physical health development, and psychosocial problems among the youth.

Each mentoring programme is unique and challenging (Labin 2017) and, therefore, would require specific settings for its successful conduction (Olivier and Burton 2020). The schooling years should help students build resilience, mental well-being, and a multifaceted, well-rounded personality. In alignment with certain rural schools, the principals (faculty team) at autonomous education institutions (AEI) designed a rural mentorship programme. Considering that India has the largest adolescent population in the world (UNICEF 2021), one of the Indian autonomous education institutions (AEI) took the initiative and designed a learner-centric rural mentorship programme.

34.3 Objectives of the Mentoring Programme

The programme coordinators explored the opportunities of engaging urban post-graduate students to mentor students studying in various schools in rural India. The programme aimed to support adolescent students in developing their personality, core life skills, and fundamental human values.

This document depicts how Parivartan's journey was undertaken; hence, an attempt has been made to journalize the attempts. This study covers the following facets of such a programme:

- Establishment of social initiative (Parivartan).
- Organizational development.
- Elements of mentoring programmes.
- Result and performance of the programme.
- Scope for development.

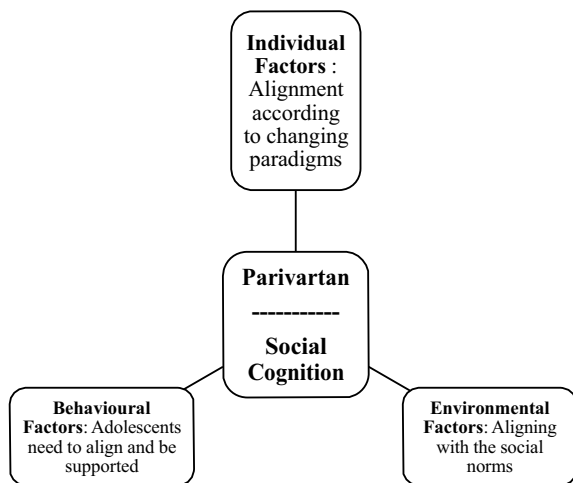
34.4 Theoretical Underpinning

Given the springing needs to align with the mission of NEP-2020, the need to develop an adolescent mentoring programme was felt. Each mentoring experience creates learning through dynamic and reciprocal interaction among individuals, their environment, and their behaviour (Schunk and DiBenedetto 2020; Bandura 2003). Principals, therefore, postulated a possible underpinning of social cognitive theory for this work. Mentoring programmes aim to create awareness that yields learning by establishing a social change programme that supports adolescent students (Fig. 34.1). The postulation remained in considering the importance of dynamic and reciprocal interaction among proteges, mentors, and researchers. Planning to take this project in a multilevel mentoring, an angle of social cognition theory was developed, aligning diagnostic models and the KASH coaching model (Williams 2005) for exploration of the case and content creation during the conduction of the programme, respectively.

An exploratory case study descriptive (Yin 1993) was undertaken to pursue this work. Ogawa and Malen (1991) suggested three good alignments of using an exploratory case study, i.e. inductive prominence, support in the literature review, and minimizes biases and errors. The principals retrospectively investigated the phenomena over two years (2021–2023) and described the proceedings and results of the undertaken project. Data on rural mentoring was collected from various sources, including interviewing reporting officers, minutes of the meetings, strategic documents, institutional websites, and social media links. The gathered data was evaluated to find the responses to various questions (Table 34.1) regarding the chronology of the incidences (Yin 1993).

The validity of emerging realities was verified as the data was collected through different members who worked on the project. Other responses for the same incidences were questioned to overcome confusion or difference of opinion. Finally,

Fig. 34.1 Aligning social cognition theory with Parivartan research approach



34.6 Organizational Development

This section primarily attempts to respond to two questions, i.e.

- What steps were taken about developing a rural mentoring programme?
- How was teamwork undertaken in the project?

However, the essence of organizational development remains in enabling an organization to respond better to new demands. In this case, the newer demands stem from three sources (Fig. 34.2). Hence, in this section, an explanation for the planned change initiatives has been presented.

34.7 Development of Social Initiative “Parivartan”

Various thoughtful external forces brought changes in the social functioning of the organizations. These forces were the sustainable development goals (SDGs) (Pandey 2018) and the Government of India’s initiative on the new education policy in 2020. While SDG-4 focused on improving access to affordable technical education in India, NEP-2020 initiatives prominently focused on quality education and lifelong learning. As a result, the NEP-2020 emerged on five pillars: access, affordability, equity, quality, and accountability. These forces became essential antecedents in the functioning of AEI and its role in transforming and supporting educational endeavours across the country. Thus, there existed a mutual need for rural mentoring for adolescents.

Given the scenario and alignment to its fabric of the social organization, AEI geared itself to external changes (Fig. 34.3) and initiated a programme called Parivartan. In response to the external changes, principals at AEI saw the potential of exploring knowledge sharing as a more progressive, creative, and innovative opportunity. A team of six members was constituted in the pursuance of this programme. This team comprised two faculty members from behavioural sciences, three from an engineering background, and one from economics. The team comprised three women and three men. Their age was from 43 to 62 years, and all had 10+ years of academic and industry experience.

Students from AEI were trained to be mentors and mentored the various students from rural schools across the country. The team members synced the mission and vision of AEI and Parivartan. Creating sync between their intentions and actions, the team members then re-examined the values and perceived purpose of Parivartan. As a result, the programme’s purpose was refined to meet the needs, mission, and vision of AEI (Fig. 34.4). This refining led to a sync between the mission and vision of the AEI and the Parivartan programme.

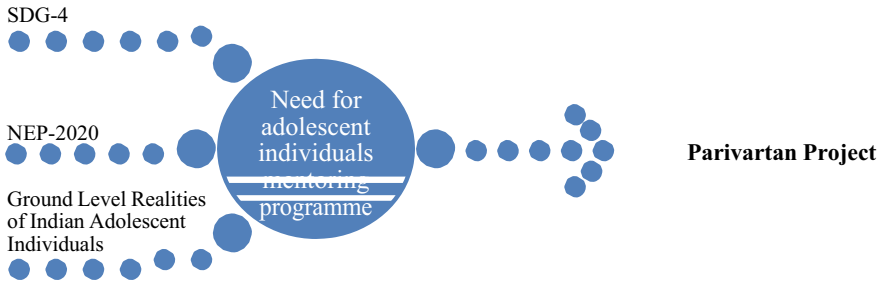
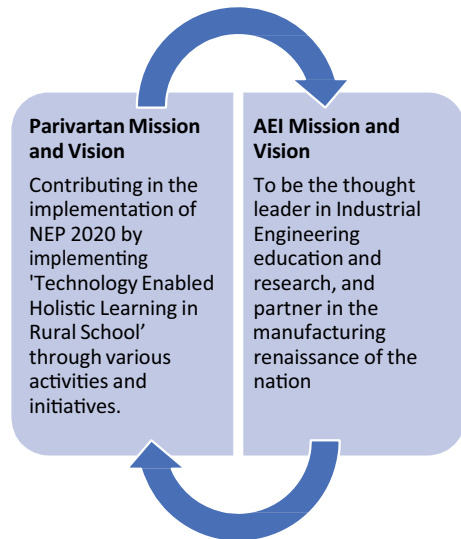


Fig. 34.3 Drivers for initiating Parivartan. *Source* Authors’ own

Fig. 34.4 Syncing mission and vision of AEI and Parivartan. *Source* Author’s own



34.8 Programme Designing

The members initiated the programme by brainstorming ideas about seeking knowledge-sharing opportunities in a more progressive, creative, and innovative manner. The principals, after several reiterations of discussions with the board, finally proposed a plan and put it up for the approval of the head of the Institute. The role and number of students in the administration team during this plan were defined. However, various challenges emerged:

- i. How should mentoring be undertaken? Dyadic or group, and what should the group size be? Should cross-gender mentoring be allowed? What should be the number of men and women mentors?
- ii. How should the travel arrangements for the mentors to visit the villages?

Table 34.2 Details of the student administration team

S. No.	Positions	Responsibilities	No. of students
1	Coordination Chief	Coordinate different processes of the forum	4
2	Social Mediaholic	Create Videos and content for social media posts	2
3	Collaboration Ambassador	Collaborate with NGOs, NPOs, and external stakeholders	1
4	Innovation Alchemist	Come up with new ideas for initiatives and competitions	1

- iii. Considering the batch life of students (years for which students stay on campus) in AEI, i.e. two years, the administration team had the challenge of deciding the frequency of the mentor recruitment process.
- iv. How could schools in rural places be identified for a possible collaboration?
- v. How should the concerns of various languages spoken in India (if protégés have difficulties understanding Hindi and English) be addressed? Should mentors be customized to the need of the protégé, or should the protégé be sought based on available mentors?

A consensus was obtained for dyadic mentoring. However, since it was experimentation to be initiated for the first time, the committee members felt the need to go slow and decided to take a call on cross-gender mentoring contingently. First, however, an arbitrary number of 15 proteges (males and females) was undertaken. To correspond to the intentions, the roles of students were defined. They were divided into two groups, viz., the first group was named administrators, and the second group was the mentors. Their roles were synced with the roles and responsibilities of AEI members. Since students completed their course in two years, their positions were kept replaceable every year through recruitments of fresh students interested in undertaking roles and responsibilities in the programme. For the core student administrator mentorship programme team, the faculty team estimated the requirement of eight members in the core team. The details of the Parivartan team were as follows (Table 34.2).

34.9 Structuring of Organization

An organogram was prepared to meet various functions (Fig. 34.5). Figure 34.5 demonstrates how the alignment of functions and responsibilities was undertaken. The student committee worked under the control of the faculty committee supported by the Research Associate (RA). The faculty committee worked under the leadership of the chairperson. The chairperson reported to the Dean and then to the Director of

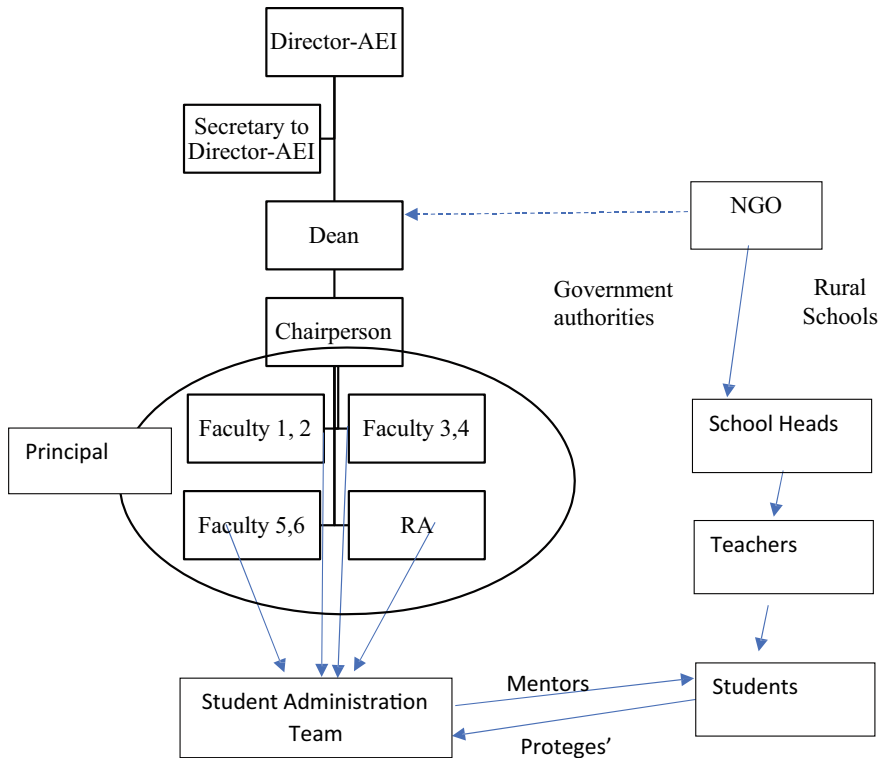


Fig. 34.5 Organogram Parivartan programme. Source Authors' own

AEI. AEI Board of Governance approved the plan, and the work was further initiated. Similarly, coordination with NGOs was established through reliable sources.

The recruitment and selection of student teams (mentors and administrators) were undertaken. Various criteria such as communication skills, critical thinking, ability to multitask, patience, and observational skills were considered for their selection. Since this was the first year of the selection, the process was initiated by faculty members. However, for consecutive years contingently, the faculty members decided to undertake multilevel mentoring (Fig. 34.6), and therefore, multilevel mentoring strategies were decided.

Once the team was onboard, various prerogatives were taken to train the mentors. These mentors were taken for field visits to rural villages near the Talegaon area. Based on their initial experience, faculty members resolved their queries and supported them in taking the project further. Identified NGOs also supported them in these training endeavours. Various deliberations are done while training the mentors:

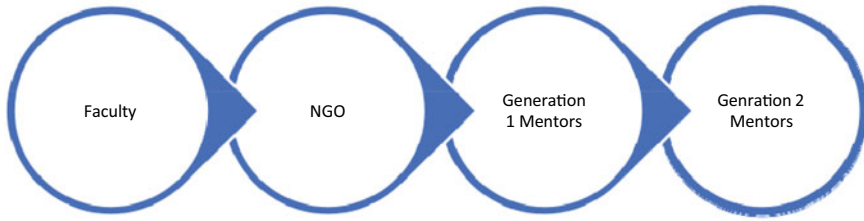


Fig. 34.6 Multilevel mentoring

- (i) Do's and Don'ts of mentoring—working with Standard Operating procedures and Ethical guidelines.
- (ii) Collaborating with protégé—how to understand them and their problems better?
- (iii) Psychological contracting and maintenance of relational boundaries.
- (iv) Understanding rural culture.
- (v) Problem-solving.
- (vi) Communication skills.

After the visit, the team brainstormed what each person gathered from this experience. All points were put together, and the perspectives were led towards conclusions, so they could be converted into action points. The most important takeaways from this visit were the:

- Need for career counselling.
- Spreading educational awareness in building confidence and independence in the children.
- Social and Entrepreneurial Skills.
- Need for Social Support—Career and Educational Guidance.

34.10 Identification of Protégé

The criteria for protégé identification were as follows. The protégé should be:

- Students of 6th–9th grade who come from a low-income background.
- Comfortable understanding English and Hindi (most mentors were comfortable in these languages). Else alignment of mentor-protégé for different languages is done based on the availability of a particular language-speaking mentor.
- Demonstrate aspirational values (curious and ambitious students—personality and conduct—identified by school principals).

34.11 Elements of Mentoring

This section attempts to answer questions about how learning activities were designed and how knowledge sharing was undertaken between mentor and protégé. The response to these questions aligns with designing course content development methodology.

34.12 Course Content Development Methodology

With the focus of attention on various education parameters and rural youth transformation, one of the essential elements of Parivartan was developing the course content. In this pursuit, the NEP and SDG requirements were referred to. While NEP-2020 emphasized conceptual understanding rather than rote learning for exams., creativity, critical thinking, encouraging logical decision-making, innovation, and learning human and constitutional values with extensive use of technology, SDGs focused on quality education comprising cognitive learning, socio-emotional learning, and behaviour learning. Therefore, the KASH framework¹ (Williams 2005) was used to formulate the content of the course (Table 34.3).

34.13 Mentor–Protégé Sessions

The events were planned and conducted as per the schedule shown in Exhibit I. Various challenges were experienced, but agile management during COVID times moderated these challenges. Working collegiately in terms of groundwork brought team cohesion. As a result, none of the sessions was affected. Outcome details will be discussed in the next section. Shifting the offline programme to an online programme was initiated with mobile technology support. Mentors conducted the sessions to support the protégé in using Google Meet. However, since students came from a rural background, the programme was affected due to bad networks, unavailability of mobile phones for children, poor living conditions at home, and increased infections in the surroundings. Despite working from home, the students and mentor were motivated to coordinate the timely delivery of sessions. All the sessions were monitored and tracked the session appropriately.

Table 34.3 KASH framework

Focus	Knowledge	Attitude	Skills	Habits
Emphasis	Facts and information that should be known to improve the performance	Developing a way of perceiving things	Ability to perform tasks	Learned mode of behaviour that may be used for practising
Example: communication	Theory	Moral values, ethics, perseverance, humility, gratitude	Communication skills, public speaking skills, language skills	Self-confidence, seeking help, optimal risk-taking, finding happiness within, being poised, being sensitive to others, having no judgments, assertiveness, balancing competition, and listening ⁱⁱ
Entrepreneurial	What is entrepreneurship?	Passion, bravery, flexibility, good intentions, ethics, and integrity are needed to run the business successfully (Williams 2005)	Basic understanding of profit and loss, money spent and earned, and relationship building (Williams 2005)	Self-confidence, openness, and growth mindset (Williams 2005)

34.14 Performance Result and Scope

This section attempts to answer the questions on the impact and effectiveness of the programme. The scope was identified based on perceived challenges. The impact of the programme is presented in Table 34.4. The feedback was gathered from all the stakeholders. The summary of the feedback analysis of the programme has been presented in Exhibit II.

The overview of the rural mentorship programme is given in Table 34.5.

Table 34.4 Impact of rural mentoring

Particulars	N
No. of sessions	70
No. of mentors	35
Total no. of sessions	2450
Minutes per session	90
No hours per mentor	53

Table 34.5 Overall view of the programme “PARIVARTAN”

Theoretical framework	KASH for positive youth development
Target ages	11–19 years’ adolescents
Eligibility	<ol style="list-style-type: none"> I. Rural background II. Low income III. Meritorious profile IV. Ambitious and aspirational value V. Access to the internet and mobile VI. Basic understanding of Hindi or English language
Mentors	Postgraduate students in AEI, Mumbai
Matching criterion	<ol style="list-style-type: none"> I. Interests II. Geography III. Demographic characteristics
Mentor training	1-day orientation
Mentor supervision	<ol style="list-style-type: none"> I. Weekly session supervision II. Monthly meet-up
Key components	<ol style="list-style-type: none"> I. 1:1 mentoring II. Competitions III. Tasks IV. Role switch
Assessment	Quiz at the end of every session
Mentor intervention	<ol style="list-style-type: none"> I. Social activities II. Career counselling III. Social/emotional skill building IV. Self-assessments V. Visioning and goal setting
Programme dosage	30 weeks; 2–4 h mentoring weekly; 1.5 h skills groups weekly
Documentation	Session PowerPoint deck, attendance record, feedback record
Farewell	Farewell of senior mentors and transition to junior mentors

Proteges were reported having learnt new things from mentors, such as improvement in understanding basic concepts, thereby supporting improvement in extracurricular performances. Proteges were reported to have an improved sense of personal hygiene, human values such as determination, humbleness, and compassion, cultural values such as why celebrates different festivals in India, communication skills, debating skills, general knowledge of historical monuments, historical personalities, life on land concepts of physics such as energy, natural resources, energy. These perspectives provided them with stances of life skills establishing rural–urban connections. Connecting with mentors, some of the proteges reported having improved English speaking skills. Career counselling gave them possible avenues to match their potential interest. Mentors guided them in deciding their course of action to pursue their career interests. They gave them insights into various institutes that offer the best courses to match the areas of their interest.

34.15 Implications of the Study

The implications of this work could be understood both at theory and practice levels. In terms of theoretical underpinning, principals explored the perspective of working through social cognition theory, diagnostic model, and KASH framework. For example, highlights could be seen in the dynamic and reciprocal interaction of learners and mentors in a multilevel mentoring programme. Multilevel mentoring opened the doors for improving intrapersonal, interpersonal, and social abilities to explore necessary knowledge and skills, e.g. shifting to online mode. Open Communication enhanced tenacity to seek feedback and overcome differences of opinion. The collegiate and cohesive team bonding during peak COVID-19 times could be seen as a live example of behaviour (responses to stimuli to achieve goals). They learnt modelling of behaviours in the multilevel mentoring programme. Their constant support and cohesion reinforced future orientation, supporting mentors and proteges aligned with the rural environment, understanding individual needs (external social context) value for AEI and other stakeholders supporting NEP-2020.

In practice, the aligned processes could be explored in various situations, and theoretical underpinnings in creating various teaches, e.g. topics such as communication and social entrepreneurship, were undertaken in pursuing content creation. This case, therefore, could be useful in teaching:

- Organization Development courses where learners may seek opportunities to translate their diagnosis into actions.
- Citizenship behaviour of both mentor and protégé (Darling-Hammond et al. 2020), leadership development advantages to the mentors (Dziczkowski 2013), and human and social relationship building (Dubois and Karcher 2014).
- Social entrepreneurship is where learners may seek opportunities to learn and establish social connections.
- various project and HRM functions, giving them opportunities for recruitment, selection, induction, training, return on investment, and compensation.

This study could be used as a prototype to support further mentoring programmes across various countries, thereby enabling national development. In addition, mentors received various opportunities to advance and hone their mentoring skills. Thus, this programme created a positive result of enabling students to explore various forms of mentoring, e.g. group mentoring when mentors (students from the Institute) were mentored by faculty members and when these mentors mentored their rural protégés, thereby presenting it as a tool to create positive social development.

34.16 Conclusion

An attempt was made to present how an autonomous education institution (AEI) undertook an exploratory single case study of the Parivartan programme and contributed to new education policy and transforming rural education in India. A journey of creating the mentorship programme to develop their personalities, enhance life skills, and learn fundamental human values and skills has been presented. Principals explored social cognitive theory, KASH framework, and diagnostic model; the mentoring programme supported rural adolescent individuals. The article featured both organizational development and functionality aspects of the undertaken project. Despite COVID-19 restrictions, the project successfully yielded 2450 sessions (of 90 min each), training 35 proteges over two years depicting team cohesion and understanding of social cognition.

Acknowledgements Authors would like to thank Prof. Manoj Kumar Tiwari, Director, NITIE, and for his encouraging support.

Exhibit I

Session plan	
Session No.	The theme of the session
1	Ice breaking session
2	Importance of health, personal hygiene, and first-aid essentials
3	Identify, locate, and study the seven wonders of the world
4	The seven wonders of the world—part II and continents of the world
5	Introduction to moral values and importance of self-confidence
6	Importance of honesty
7	Determination
8	Humbleness
9	Compassion
10	Role switch
11	Indian historical monuments-I
12	Indian historical monuments-II
13	Energy and different kinds of energy
14	Prashansha Samaroh
15	Forms of energy
16	Natural resources
17	Famous Indian historical personalities—part 1

(continued)

(continued)

Session plan	
Session No.	The theme of the session
18	Life on land—part I
19	Life on land—part II
20	Best out of waste competition
21	Guru Purnima
22	Olympics
23	Career counselling session 1—know your interest
24	Computer basics
25	Independence day
26	Indian culture
27	Career counselling session 2—introduction to various career fields
28	Role switch
29	Indian festivals
30	Career counselling session 3—introduction to various career fields
31	Discoveries of ancient India
32	Future of technology
33	Jugaad—innovation and creativity
34	Robotics
35	English learning (Duolingo app)
36	Green diwali
36	Diwali celebration
37	Children's day
38	World television day
39	Indian constitution day
40	National pollution control day
41	Introduction to GD
42	Communication skills
43	Christmas celebration
44	GD demo session
45	GD session for mentees

Exhibit II

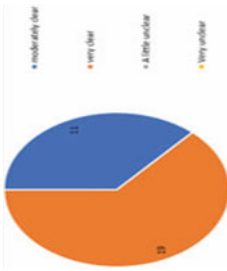
<p>Feedback from mentors</p> <p>Rate the mentorship programme</p>	<p>Rating of experience as mentor</p>																						
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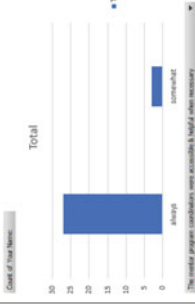
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Feedback from mentors

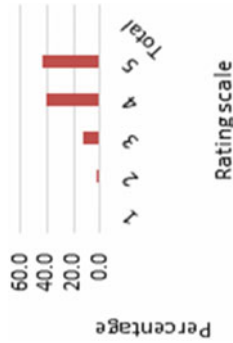
Understanding of responsibility



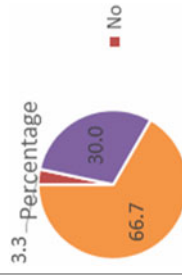
Coordinator accessibility



Contribution to rural mentorship



Ready to volunteer again



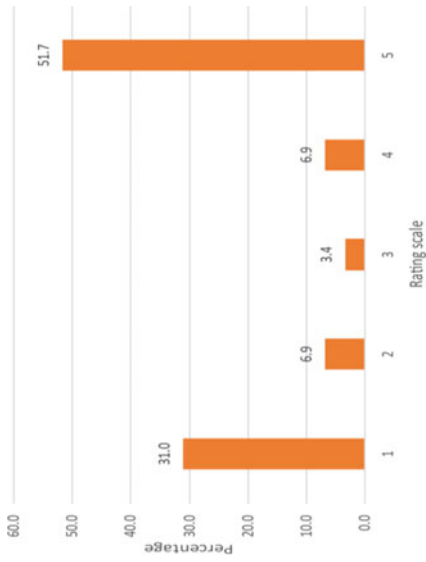
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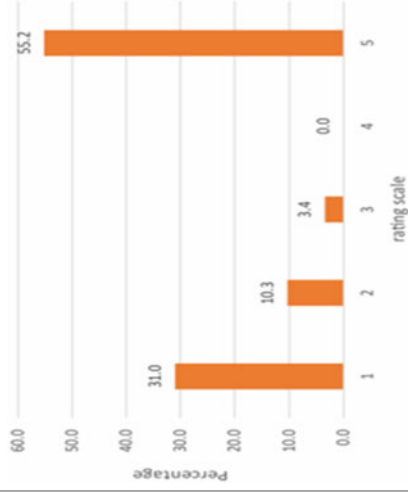
Feedback from mentors

Protégé feedback

Rating of the programme



Rating for mentor

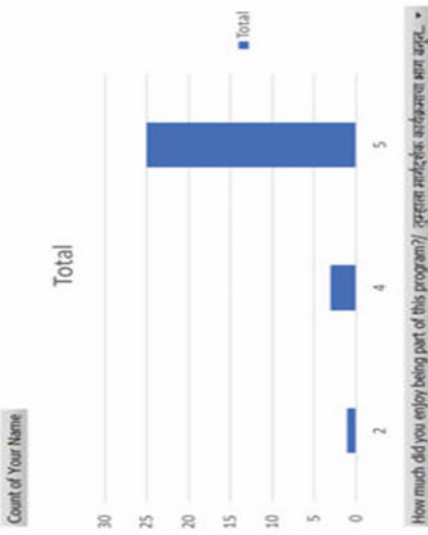


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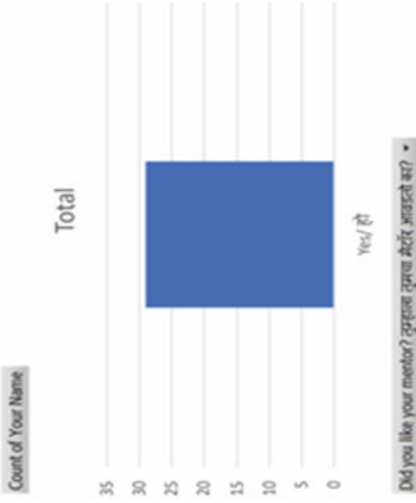
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Feedback from mentors

How much did they enjoy the programme?



How much did they like their mentor?

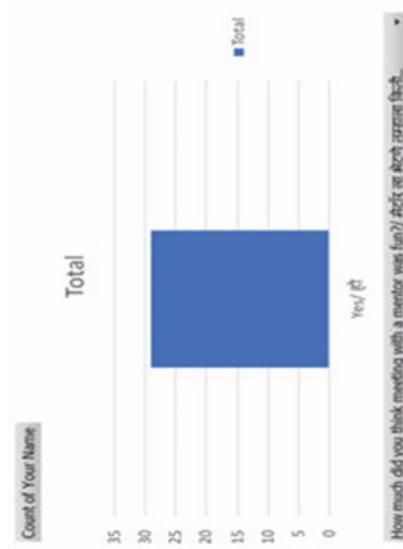


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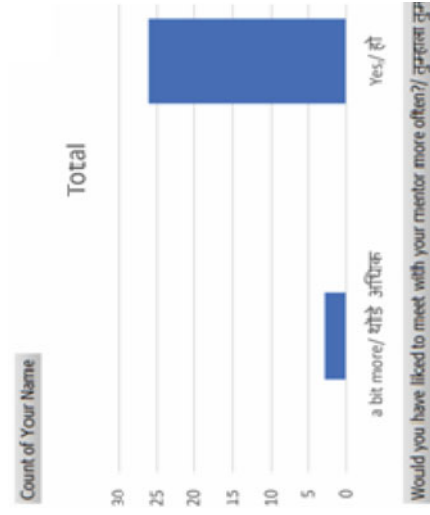
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Feedback from mentors

How much meeting with mentor was fun?



Would you like to meet with mentor more often?

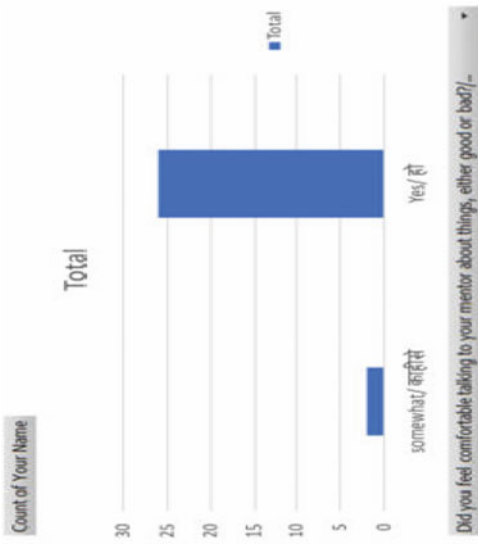


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Feedback from mentors

Were you comfortable talking to your mentor?



Did you feel comfortable talking to your mentor about things, either good or bad? -

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Chapter 35

Ecotourism in Post-COVID-19 Environment: A Social Network Analysis



Shivam Sanjay Aneja and Kali Charan Sabat

35.1 Introduction

The COVID-19 pandemic was a severe public health and humanitarian catastrophe (Bhattacharyya and Thakre 2021). By October 2022, India had a total of 44,600,000 COVID-19-positive cases and 529,000 COVID-19-related deaths. (Worldometer 2022). Since the mid-March 2020 breakout of COVID-19, the Government of India (GoI) had tried a range of measures to control the virus's spread (Krishnakumar and Rana 2020). These measures included a complete lockdown of the country, followed by partial relaxation and curfews at night, among others (Government of India 2020). As a result of the GOI's efforts to restrict the spread of COVID-19 through lockdowns, tens of millions of people in rural areas of the nation were placed at risk of falling into extreme poverty, hunger, and healthcare emergency (Krishnakumar and Rana 2020). The World Health Organization (WHO) indicated that the COVID-19 outbreak had a greater economic impact on informal sector workers in distant regions of developing countries such as India. This was due to the fact that they did not owe productive assets and other means of subsistence (World Health Organization 2020).

Ecotourism is an excellent means of resolving this problem and fostering long-term sustainable development (Khanra et al. 2021). Ecotourism is responsible travel to natural places, with a focus on preserving the environment and ensuring the well-being of the local population. Nonetheless, inefficiencies and resource constraints in India represented a substantial barrier to ecotourism during the post-COVID-19 period (Tirupakuzhi Vijayaraghavan et al. 2020). Ecotourism is "*environmentally responsible travel that emphasizes social responsibility and traveler development*" (Khanra et al. 2021). This type of tourism encourages travelers to visit places where

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flora, fauna, and cultural heritage are the key tourist attractions (Bhuiyan et al. 2012). Multiple public and private organizations have been promoting ecotourism in this challenging terrain (Madhukalya 2021). This study aims to answer the following two research questions:

- To what extent would social network ties facilitate the streamlining of ecotourism in the post-COVID-19 pandemic era?
- Which types of social network ties influence ecotourism the most in the post-COVID-19 pandemic era?

Using networks and graph theory (Scott 1988; Freeman 2004; Majeed and Rauf 2020), social network analysis was utilized to study social network linkages between individuals in order to answer the two research questions in this study (Dmitri 2019).

35.2 Theoretical Foundation

In this section, the authors present the theoretical grounds of their research investigation. The notion of ecotourism has been introduced first. Subsequently, the perspective on social networking theory has been presented.

35.2.1 *Ecotourism*

Ecotourism was viewed as an essential tool for the development and advancement of any nation's economic, social, and environmental systems (Harahab et al. 2021). Table 35.1 discusses some significant studies in the ecotourism area.

35.2.2 *Social Networking Theory*

Understanding the location of a focal actor within the social network of other actors was one of the objectives of the social networking perspective (Qureshi et al. 2016). This analysis identified opportunities and obstacles for societal development (Mehra et al. 2001). Dissatisfaction with the dominant structuralist paradigm underlying "Institutional Theory" gave rise to the development of ecotourism (Roxas and Chadee 2013). However, research on social networking theory was inspired by discontent with the notion that individuals were expected to make decisions in isolation (Borgatti et al. 2009). Therefore, the social network theory perspective sought greater comprehension (Vallor 2020). This pertained to how various contextual and social ties placed pressure on organizations and people to plan actions (Kilduff and Tsai 2003). In numerous ways, social networks influenced the behavior of a central player (Qureshi et al. 2016). By offering financial and/or emotional support to a central actor in

Table 35.1 Important studies in the ecotourism area

Title	Author	Methodology used	Key findings
A Study on Ecotourism and its Sustainability in India	Patel (2020)	Descriptive research	In 2020, COVID-19 had drastically altered the tourism business
The Concept of Ecotourism: Evolution and Trends	Diamantis (1999)	Descriptive research	The research within the ecotourism field was in its infancy. The three fundamental ecotourism concepts were natural, educational, and sustainable (which included economic and social criteria)
Ecotourism and Sustainable Development: A Scientometric Review of Global Research Trends	Xu et al. (2022)	Scientometric analyses and citespace	The evolution of ecotourism was distributed into three phases: human disturbance, ecological services, and sustainable development
Ecotourism Intention: The roles of Environmental Concern, Time Perspective, and Destination Image	Pham and Khanh (2020)	Multivariate data analysis method	This study demonstrated high relationships between three critical characteristics that influenced the intention of Vietnamese tourists to visit ecological destinations. These were an environmental concern, future temporal perspective (individual opinions on the significance of the future), and the image of eco-destinations (understood as individual perceptions of an ecotourism place) The study also revealed strong connections between the image of an eco-destination, a perspective on the future, and environmental care
Research on Management of Ecotourism Based on Economic Models	Jing and Fucai (2011)		The revenue model of the study demonstrated that taxes can not only reduce the strain between supply and demand on ecotourism but also assisted ecoscenic areas in obtaining funding for ecological reparation

the pursuit of its aims, social networks influenced worldviews (Jack 2005). Social networks also supply knowledge and information that strengthen or challenge the views of the central actor (Uzzi 1996). Typically, the focal actor was the one who gets influenced by the network's other actors (Kurt and Kurt 2020). However, other actors may also impact the central player (Qureshi et al. 2016). The focus actors have often decided when, where, and with whom to interact for dynamically managing network influences (Fang et al. 2015).

According to Kilduff and Tsai (2003), the literature on social network analysis primarily focused on two categories of characteristics: The first related to social networking technology as a whole and the second to social networking relationships kinds. Regarding the characteristics of social networking technologies, researchers explored how elements such as centrality, network density, and reachability typically influenced the behavior of actors (Morrison 2002). In addition, researchers frequently investigated how structural gaps in the network (Sasovova et al. 2010) provide chances for strategic action (Burt 1997). In contrast, “network ties scholars” had mostly concentrated on the dyadic interactions between the primary actor and other actors as a means of influencing behavior (Qureshi et al. 2016). Classifying the links as homophilic and heterophilic was relevant to the studies about institutional behaviors, despite the fact that there were several distinctions between types of ties (McPherson et al. 2001). Homophilic links were extremely similar partnerships, whereas heterophilic ties were distinct relationships (Mehra et al. 1998). Frequently, perceptions of likeness were based on social class, education, and historical relationships (McPherson et al. 2001). Homophilic relationships served to strengthen shared characteristics and identities among members of a social network, whereas heterophilic ties served to increase diversity and inclusiveness across many social spheres (McPherson et al. 2001).

This study sought to investigate the potential consequences of social network linkages by analyzing the relationship between tie type and frequency (these being frequent homophilic, infrequent homophilic, frequent heterophilic, and infrequent heterophilic). Given the dynamic nature of social networks, determining the extent to which social network links supported or limited social development is a tremendously complicated endeavor (Castells 1996). Therefore, the authors of this study employed a qualitative methodology. This sought to investigate the various, and possibly time-specific effects of social network links in the post-COVID-19 pandemic period on ecotourism.

35.3 Research Study Methodology

The purpose of this research was to determine the influence of public and private social networks in streamlining ecotourism in India following the COVID-19 pandemic. The focus of the Government of India throughout the past few decades has been on the rapid economic expansion (Parikh et al. 2016). However, this also resulted in a diminished focus on concerns related to the development of environmentally and socially responsible travel (Bhuiyan et al. 2012). Consequently, during the recent pandemic, government institutions were ill-equipped to deal with the economic and social difficulties caused by the catastrophic disruptions (OECD 2020). Due to the COVID-19 outbreak, ecotourism in India, which was still in its infancy and was a highly unorthodox form suffered greatly. In most regions of the country, the general public was likewise largely unaware of ecotourism’s presence (Harahab et al. 2021). Consequently, it provided a useful environment for investigating the function

of social networks in streamlining ecotourism in various states of the country in the post-COVID-19 scenario.

In this study, in-depth interviews (Campitelli et al. 2019) were done with individuals in order to investigate how ecotourism in India was conceptualized. This pertained to both homophilic and heterophilic social networking relationships, as proposed by Qureshi et al. (2016). Respondents included college students, housewives, and private sector employees who engaged in ecotourism during the post-COVID-19 pandemic period. To begin, the respondents were asked to describe ecotourism in India and how the general population regarded it during the post-pandemic period in a more general sense. Subsequently, the respondents were asked to compare and contrast their individual accounts of the crucial importance of their social and public network connections during the post-COVID-19 pandemic era.

In the context of ecotourism, a homophilic tie was defined as “*someone who lived within the same social sphere as the focus actor*”. The “social sphere” may be the outcome of affiliation, employment, or shared linguistic, religious, or ethnic characteristics (Qureshi et al. 2016). Thus, homophilic relationships revealed similarities in terms of some behaviors and customs based on a shared history or background (Mäkelä et al. 2012). In contrast, heterophilic ties were deemed “*to exist between people who belong to various social spheres in terms of affiliation, occupation, or belongingness*” (Qureshi et al. 2016). Typically, heterophilic ties were forged during college or through professional relationships with members of diverse organizations. The participants’ accounts demonstrated that their view of homophilic and heterophilic relationships corresponded closely to how they were portrayed in the literature (Louch 2000). In addition, the ideas of “*frequent*” and “*infrequent*” ties were found to be very compatible with how they were presented in the literature on social networks (Qureshi et al. 2016).

35.4 Data Collection and Analysis

The approach for gathering data commenced with the identification of individuals from diverse professions who participated in ecotourism after COVID-19. As recommended by researchers, data collection for the study began with an initial diary study (Rausch et al. 2022). This was followed by a series of semi-structured interviews designed to question and strengthen the first ideas (Brown and Danaher 2019). Finally, the authors examined the extent to which the motifs were prevalent in ecotourism (Qureshi et al. 2016). A preliminary interview was conducted with two potential participants to evaluate the following criteria:

- Whether their initial ideas were consistent with our definition of ecotourism.
- Whether they were actively involved in ecotourism during the post-COVID-19 pandemic.
- Whether they had shared their ecotourism ideas with their social network ties.

The authors recruited seven individuals for the diary study based on the replies to the preliminary interview questions.

At the start of the diary study, the terms “homophile”, “heterophile”, and “frequency” were explained to each participant to ensure a unified understanding of network relationships as advised by scholars (Qureshi et al. 2016). The participants were subsequently handed an incidence record sheet (see Fig. 35.1), which contained a series of questions to be answered.

Incident Record Sheet										
Demographic details										
1. Your Name:			4. Age:		5. Education:			Organization (that initiated ecotourism):		
3. Gender:			4. Age:		5. Education:			Organization (that initiated ecotourism):		
Social Ties										
1. Number of Social Ties (ST)										
1.a Number of incidents of ST with different ecotourism participants (within the organization and outside the organization) in the post-pandemic period:										
1.b. Number of ST within the organization:										
1.c. Number of ST outside the organization:										
2. Type of Social Ties										
2a. How many incidents were Frequent Heterophilic Ties (FHT):										
2b. How many incidents were Infrequent Heterophilic Ties (IHT):										
2c. How many incidents were Frequent Hemophilic Ties (FHM):										
2d. How many incidents were Infrequent Hemophilic Ties (IHM):										
3. Provide the sequence of interactions (FHT, IHT, FHM, IHM) in the ecotourism post the Covid-19 pandemic:										
4. Social network ties believed promotion of ecotourism is government’s responsibility										
Strongly Disagree 1 2 3 4 5 Strongly Agree										
5. Awareness level of “Social Ties” about ecotourism activities										
Very Low 1 2 3 4 5 Very High										
6. What was majority of “Social Network Ties” response to your (or your company’s) ecotourism idea/initiatives?										
Extremely Discouraging Indifferent Extremely Supportive										
-5	-4	-3	-2	-1	0	1	2	3	4	5

Fig. 35.1 Incident record sheet format

Participants' relationship with the tie, the tie's response to their initiative, and the tie's nature was questioned. The information collected from participants was summarized in Table 35.2. Seven participants (4 men and 3 women) recorded a total of 22 contacts with members of their social networks (mean = 3.14, standard deviation = 0.90).

The number of each type of social network tie that respondents interacted with was: frequent homophilic ties (13); infrequent homophilic ties (5); infrequent heterophilic ties (3) and frequent heterophilic ties (0). Table 35.2 also provided information on how many of each type of tie were approached by each study participant and the sequence in which these ties were approached (Fig. 35.2).

To analyze the patterns in the diary data, a graphical representation of each contact incident was created for all participants (refer to Fig. 35.3).

The maximum numbers of ties were frequent homophilic ties. In most cases, social networks started with frequent homophilic ties. And, in most cases, it ended with infrequent heterophilic ties (refer to Fig. 35.4).

In an attempt to evaluate whether the themes that appeared in the initial diary study were reflective of the ecotourism experiences, the authors subsequently conducted semi-structured interviews with the same set of participants. Discussions with the participants suggested that most ties disagreed with the common belief that "social issues are the government's responsibility". Also, it was found that the awareness level of social network ties about ecotourism was high. In most cases, a majority of social network ties were extremely supportive of ecotourism ideas and initiatives.

35.5 Discussion and Conclusions

The primary purpose of this research study was to apply a social network lens to ecotourism practices during the post-COVID-19 pandemic time. Several previous studies used a micro- or macro-level lens to explain why some actors came to engage in non-conforming behavior while others did not (Battilana et al. 2009). The authors focused on social networking ties as meso-level spaces, where individual actors interacted with each other (Qureshi et al. 2016). At the basic level, while comparing the data across the graphical representations of the contact incidents for each participant within the initial diary study, several patterns emerged. First and foremost, the sequence of interactions started with infrequent heterophilic ties. However, homophilic social ties were more supportive when compared with the sequence of interactions starting with heterophilic ties. The findings contradicted the institutional theory (DiMaggio and Powell 1983) that proposed that related individuals could develop ties for a social cause more easily when compared with unrelated institutions.

Table 35.2 Diary participants and number of social network ties contacted

ID	Gender	Age	Education	Incidents	IHT	FHT	IHM	FHM	Sequence ^a
P1	F	44	Masters	4	0	0	0	3	FHM → FHM → FHM
P2	M	23	Bachelor	3	1	0	2	0	IHT → IHM → IHM
P3	F	55	12th pass	2	0	0	2	0	IHM → IHM
P4	M	54	Bachelor	4	1	0	1	2	IHT → FHM → IHM → FHM
P5	F	36	Masters	3	0	0	0	3	FHM → FHM → FHM
P6	M	41	Ph.D.	4	1	0	0	3	FHM → FHM → IHT → FHM
P7	M	41	Bachelor	2	0	0	0	2	FHM → FHM

^aOrder in which ties were approached. For P4 the sequence indicates that IHT was approached first then FHM, IHM and finally FHM. Refer to Fig. 35.2 for additional details

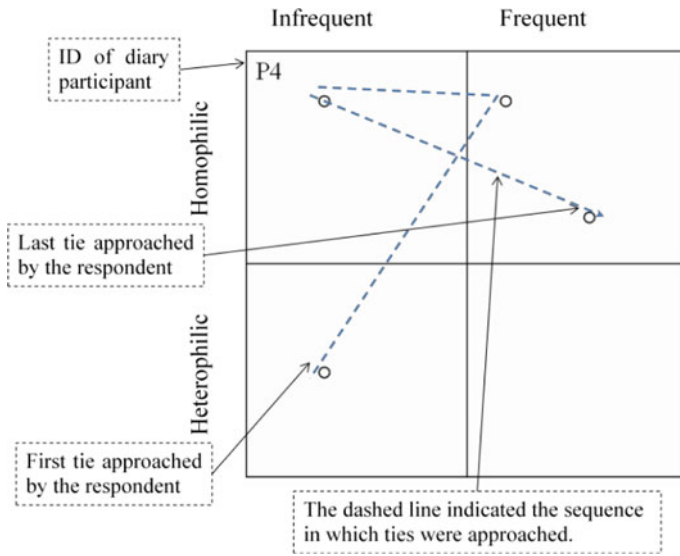


Fig. 35.2 Analysis of participants’ diary

Furthermore, the research study found that the support from social network ties could be influenced by the frequency of tie contact. The frequency of contact can have a moderating effect on the relationship between interaction and support from social ties (Qureshi et al. 2016). Studies in future could be undertaken to investigate such a moderating effect. Moreover, the graphical representations of the data obtained from the initial diary study suggested that the order in which participants interacted with each type of social tie had a significant impact on the ecotourism initiative. As depicted in Fig. 35.4, individuals were not likely to adopt ecotourism practices if the heterophilic ties that they approach first were frequent.

During the semi-structured interviews, the effect of tie sequencing observed in the initial diary study was reaffirmed. The majority of successful ecotourism initiatives began with infrequent heterophilic ties and concluded with infrequent homophilic ties. Consequently, only a specific sort and sequence of early-stage interactions with network ties could initiate networking in ecotourism. The frequency with which these patterns occurred might help in explaining why individuals often find it difficult to adapt to frequent changes in the social network while deciding on ecotourism destinations.

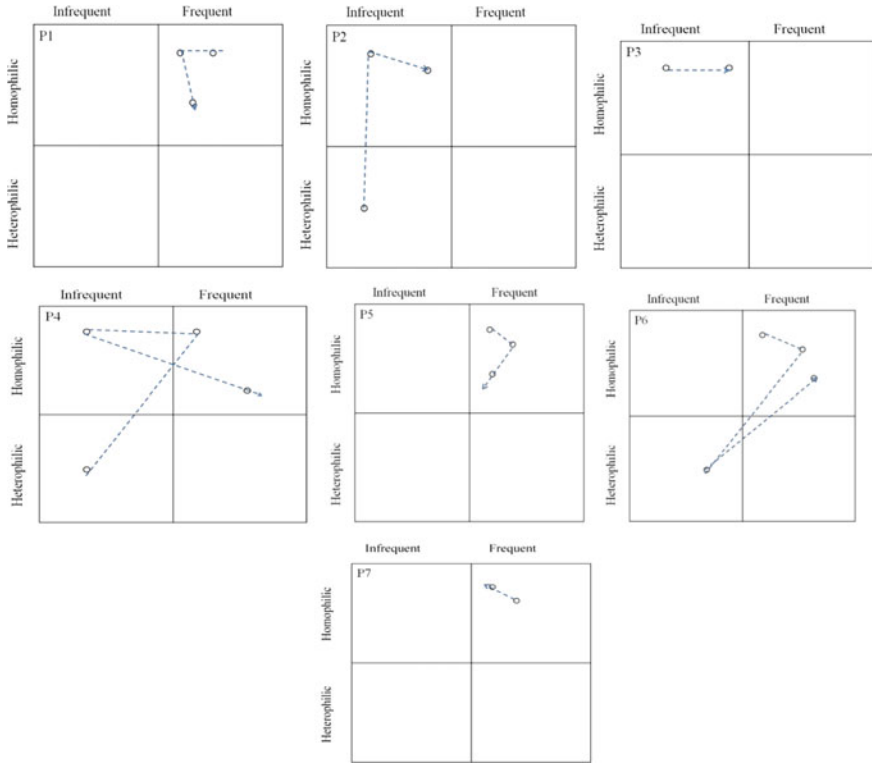
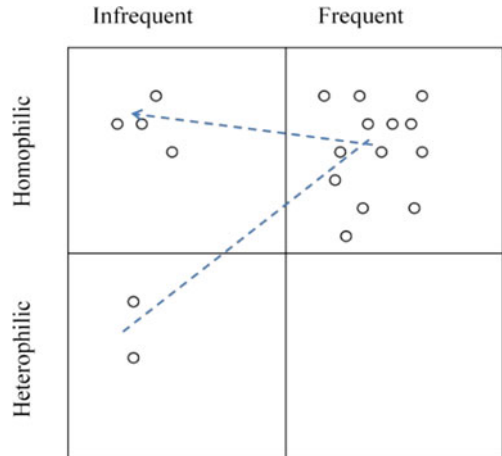


Fig. 35.3 Analysis of individual participant's diary

Fig. 35.4 Summary of participants' diary



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Chapter 36

Building Start-Up Ecosystem Through Social Enterprise Business Model: A Study Reference to Women Empowerment by Social Enterprises



Nisha Pandey and Deepali Kamle

36.1 Introduction

Social entrepreneurship envisaged the role of social enterprises (SEs) in human development. SEs are usually small capacity units responsible for local resource building through community participation. Social entrepreneurship literature also emphasizes the central role played by social entrepreneurs, community leaders, and volunteer participation. Social enterprises and even community-based enterprises are established on the ideology of social entrepreneurship. SEs are managed and administered by the community people for sustainable benefits of individual and group. The essence of social entrepreneurship lies in linking values through networking. Even social entrepreneur's ideology, his altruism, and tradition are usually considered the key dimension in the development of social entrepreneurship.

Nevertheless, rural communities are still vulnerable to multiple political and economic pressures. Prevailing policy frameworks put forth challenges in social enterprise operations since the policy framework doesn't fit the enterprise vision of social value creation. The plethora of policies is scattered and not connected to social enterprise strategies. Appropriate regulatory frameworks in the social enterprise ecosystem can provide even financial relief and further provide measures to evaluate social impact, depending on the various constructs responsible for social value creation.

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36.1.1 Business Model

In terms of the business models of commercial and social entrepreneurs, there are distinct differences. For instance, a business model of a commercial entrepreneur is subjected to turbulence in the international economic and political environments. Currency fluctuation risks, political risks in terms of war and regional conflicts; worsening international economic relations between two countries engaged in trade and commerce, etc. The same set of circumstances may not equally and severally affect the national level and regional level SEs, which are attempting to solve the local social issues. However, in select cases like donor funding from international agencies and donors; development aid and charitable contributions from the industry abroad, certain basic changes premises may affect large national SEs that impose the need to review the existing business models.

Moreover, a business model, which suggests to the social enterprises that the profits they may make, can be utilized for reinvesting in the products and services. Eventually the business model may meet the SE objectives of delivering social value, however in the end it may be drifted from its core objective. Such SEs may make a surplus but it may not result into social value generation that captivated the stakeholders. A commercial corporation may not adopt an inclusive growth model for a long time in their journey but when conditions are favourable including the government policy, SE pressures on business they may decide to publicly acknowledge their role in inclusive business model; however, in the case of social entrepreneurs it is not a matter of reaction after being in business for several decades; it is the core idea or the central objective of generating social value mooted in the core concept of their business model that guides their decisions; they are created and exist to create social value.

Generally, business models represent value proposition; policy choices; networks and relationships; and strategic resources, among others. Nevertheless, in the SE business models all these are displayed in terms of good governance and sound business conduct. SEs represent a mission to provide radical and innovative cost-effective solutions to chronic social problems. The underlying emphasis in such business models is that the SEs have to earn a minimum benchmark financial return so that they can generate a social return.

Importantly, social enterprises emphasize on the local problems or social issues. It is not just about creating social assets but mobilizing the entire set of resources that could lead to community development. Contribution of people, groups, communities, organizations, or the policymaker embedded their activities with a social framework. While attention to social change, the contribution of social entrepreneurship, social enterprise, and social capital certainly needs to be illustrated.

Perhaps the practice of these social approaches in the past few decades has been deliberated in fostering community development. To understand this phenomenon and the contribution of social jargon in community development, a research study was undertaken to comprehend the existing social enterprise business models for proposing an appropriate start-up ecosystem favourable for women empowerment.

36.2 Review of Literature

Research of any nation's overall development has focused heavily on the connection between women's empowerment and social development. Therefore, economic opportunity, social equality, and personal rights are all part of the empowerment of women. These human rights are constantly denied to women due to prejudice. Women are typically assigned to household duties and low-wage labour in rural areas since they are not seen as having any significant capacity to generate income. Their voices are stifled if they lack the ability to find employment and make a fair living (Cornwall 2016). Kabeer (1999) used this definition to conceptualize women's empowerment: "people make strategic choices when their ability was earlier denied; the existing process forces them to think outside the system and thus challenges the status quo, where people make choices from the available real alternatives without punishingly high costs". One of the most well-liked development interventions to promote women's empowerment is the self-help group (SHG) programme. It has been discovered that women's economic SHGs have advantageous effects on women's mobility, economic and political empowerment, and control over family planning (Brody et al. 2017). Even though women have made great advancements, the world still sees them as inferior to men. However, with various empowerment programmes, women are grouped into self-help groups to signify the beginning of a significant process of empowering women, despite the fact that formal education for women received very little attention. Therefore, empowerment must be viewed as a complete result of essential education processes that gives women the ability to live independent lives and the freedom to take action (Ghosh et al. 2015). SHGs are crucial for promoting good health and empowering women both at home and in society. Such organizations are frequently created for production-related tasks, encourage saving among members, and use the combined funds to support members' diverse credit needs as well as social needs.

Community development and social entrepreneurship (SE) continue to be prominent topics of conversation in the corporate sector (Howaldt et al. 2015). Solutions aimed to protect local communities' cultural, environmental, and social standards are primarily covered by social entrepreneurship (Agustina et al. 2020). The SE can also be used to develop the personal capabilities of individuals through leadership development, skills training in the health sector, capacity building for women who have volunteered in the sector, and training on family, sex, and sanitization in the neighbourhood (Hakami 2021). Practitioners and policymakers view social enterprises (SE) as organizations across the world. Social mission and financial sustainability usually sets the objectives of social enterprise and therefore do not fit into the conventional form of a state or private organization structure. SE primarily forms the hybrid organization. Hybridity as per the conceptualizations allows the existence of standards and artefacts from two or more categories (Doherty et al. 2014). This form of organization enables social enterprise to assemble appropriately the available local and non-local resources that embark on the possibility of community development through social change. SE though has the organizational recognition, it still lacks

the apt definition and structure, assuming the concept is still at the nascent stage. Fact that SE plays a potential role in the community and local development, led the discussion towards the social enterprise produce and social capital generation by SEs (Somerville and McElwee 2011). Social enterprises by their very own mission indicate the objective of financial capital sustainability that nevertheless is an indicator for reduced transaction cost. More importantly, multiple intangible factors predominantly help in the creation of social capital by social enterprises. At the basis of social entrepreneurship too, the idea developed is to transform society by way of social value creation (Arena et al. 2015).

Many rural communities adapt to change; however, few need support to overcome the change process. Persistently, women are considered the most vulnerable section of the community though they constitute almost half of the population. The path to community development begins by empowering women who are suppressed by their community and enjoy limited access to education, health, society, culture, business, etc. Some development organizations believe that empowering women can accelerate a nation's economic progress. This makes sense given that "investing in women pays off for the entire community". Women typically provide 90% of their earnings to the family on average, compared with men's contribution of 30–40%. The stated goal of many empowerment programmes is typically economic independence. When development discourse emphasizes the need to empower women and girls as the solution to broader social development and poverty reduction, it can be helpful (Porter 2013). Primarily, the health systems trust on the numerous women contributions to start caring as members of the health workforce. Women numbers as a health worker increased dramatically, taking care of home and community. This need to be given more attention, due to the complexities of the challenges faced by women across the life course. The contribution of women will exist as long as they are empowered to live healthy and fulfilling lives. For the sustainable development of women, the social, economic, and environmental contributions are essential (Langer et al. 2015). Significantly, social entrepreneur too focuses on the upliftment of social issues that are majorly associated either directly or indirectly with women. She even forms an important part of human capital management. SE encourages women to participate in SE activities in any form they would be happy to serve. By providing skill and access to women increases the chances of sustainable livelihood that in long run would lead to the eradication of poverty. Social entrepreneurs envisage the fact that other issues of society like gender, equality, class, race, ethnicity, culture, etc., can be mediated through women empowerment.

In India, despite women constituting half of the population, their problems and issues are either neglected or overlooked. India has a huge base of women population in the age of 10–50 years. According to 2011 census, the total population of women in India was approximately 586 million out of which 181 million lives in urban India and approx. 405 million from rural India. As per the census, India's female population majorly falls in the age group of 15–59 years that constitutes almost 62.8% of the female population.

Research findings in this area indicate limited intervention by the donors, government, and the private sector to uplift the social issue. The major section of the society

is still deprived of even receiving the basic understanding to the issue. Deemed idealized social entrepreneurs as bold and opportunistic change agents who can work to create social change. Social entrepreneurs' energetic, confident, persistent, and inspirational characteristics motivate them to associate themselves with the social issues, ensuring community development that happens. This therefore, demands a study to analyze the role of social entrepreneur and his social enterprise in empowering women while handling their social issues. The study also focuses on how a social entrepreneur brings a change in social norms through their social ideology.

36.3 Research Objective

While studying the landscape of India's population, it has been realized that other than gender disparity, a significant barrier to her comfortable and dignified experience confined with her menstrual hygiene management. The menstrual hygiene had also influenced adolescent girl's education, health, and sustainable livelihood. Hence, social challenges are faced by women that need to be addressed and examined.

Knowing the fact that only 18% of women population can afford expensive sanitary napkins as a possible alternative for personal hygiene and further looking at the scope of industry growth, many questions start exploding to understand the condition of women in the rural and indigenous communities in India. The research investigation would satisfy following research objectives related to social issues of women that require an immediate address:

- a. How a social enterprise can empower women of indigenous and deprived communities' while addressing the social challenges faced by women?
- b. How can women lead to community development by being a part of social enterprise themselves?
- c. How social innovation can be helpful in social value creation?

36.4 Research Methodology

The methodology followed is interpretative case study method to investigate the role of social enterprises in community development by empowering women. The case studies reviewed and interpreted form the basis of the valuable outcomes. The case studies are selected based on the healthcare- and hygiene-based cases that are more relatable to the social context and issues discussed related to women empowerment. A deductive reasoning approach followed to interpret the social entrepreneur's ideology with social enterprise, social entrepreneurship, and social innovation in social value creation. The aim of the case study approach is to capture the views of social entrepreneur in eradicating the social issues. The study involved personal interview with the social entrepreneur gaining the qualitative data for research work.

Questions were open ended. The secondary source of information was gathered from the website sources of the subject under research study.

The social enterprise selected based on its contribution in empowering women by solving the most important issue of women that is of menstruation hygiene management (MHM).

36.5 Overview of Indian Sanitary Napkin Industry

The marketers identified potential business growth in the Indian Sanitary Industry. A huge market opportunity to the businesses about the female hygiene products especially sanitary napkins. Sanitary napkins in many countries are taxable and are the luxury items. Brands were successful in bringing transformation in Indian urban societies. In India, the sale of sanitary protection products has grown to 41% from 2012 to 2017. The product design and product sustainability improved drastically in few years from the plastic-based napkins to biodegradable, tampons, etc. Marketers are reaching out to maximum women of the urban household, however still failed to reach 82% who lives in semi-rural and rural India. Affordability is a matter of concern for the rural population.

Indian sanitary napkin market reached a value of US\$550 million in 2020. It is forecasted to grow by CAGR of 12.2% during 2021–2026. At present, industry manages demand through government, NGOs, or private companies CSR initiatives. Technological advances led the manufacturers focus shift to more sustainable biodegradable product. Use of high-quality and eco-friendly raw materials increases the product sustainability that further supports the industry growth. Perhaps that might lead to increase in the cost of per napkin manufacturing. Considerably, the impact will be on the 82% of the rural female population who will be deprived ever in receiving her share of comfort to maintain personal hygiene.

36.6 Case Studies

36.6.1 Jayashree Industries

Mr. Arunachalam Muruganatham is a recipient of “Time Magazine’s 100 Most Influential People in the World 2014”. Mr Muruganatham, an Indian social entrepreneur offered dignity to women from indigenous groups in India. He made affordable sanitary towels for women, and simultaneously providing opportunity to earn money. Muruganatham, an entrepreneur changed things and thinking of women in the village. He made a social impact by designing the world’s first inexpensive machine, which produces sanitary napkins at the affordable rates. According to a report by market research group AC Nielsen, 88% of women in India use unhygienic

practices like ashes, newspapers, sand husks, and dried leaves through their mensuration cycle. More than 70% of women today suffer from reproductive tract infections, increasing the risk of contracting associated cancers because of these unhygienic practices.

Muruganatham saw the pain of women and decided to engineer a sanitary machine. In 2006, Indian Institute of Technology, Chennai awarded Arunachalam for the best innovation towards betterment of society. After receiving an Indian presidential award for his innovation, Arunachalam started his start-up company Jayashree Industries.

Arunachalam Muruganatham sells the low-cost machines directly to rural women. These rural women with the help of not-for-profit organizations avail loans from both banks and NGOs. The entire learning process takes three hours for the machine operator. An operator employs more people if necessary for processing and distribution process.

According to Muruganatham, “he is planning to make sanitary napkin available to 100% women of the country from the current level of only 2% in rural areas”. No one is bothered about uneducated and illiterate people. Through this model, they can earn and live with dignity”.

36.6.1.1 Muruganatham’s Model

Builds a viable and sustainable enterprise: The stakeholders at the grassroots can run that efficiently	Delivers an essential commodity at affordable rate: Delivering sanitary napkin to poor women at affordable rates without compromising on the raw material used or quality of the product
Reduces the players involved in the supply chain—Consumer is the third person to handle the product The social development is crucial and offers an advancement to a positive social engineering	Makes optimal use of the micro-credit The process involves grinding and de-fibration, pressing and sealing to convert the raw material—high-quality pine wood pulp—into a napkin

Murugunatham’s social innovation was his first attempt at developing the technology for the benefit of the indigenous community.

36.6.1.2 The Idea Addresses an Issue at Grass Root Level

- By reducing the unit price of sanitary napkin, Murugunatham enabled grass-root women to switch from the traditional unhygienic alternatives to napkins. Millions of women around the world, who cannot afford sanitary napkins, can now manage to live a dignified life free from unhygienic alternatives that cause vaginal infections, skin irritations, and embarrassing stains in public.

- Local production, local people, and local market helped in solving rural women problem.
- Unemployment issue among the deprived communities in rural, urban, and semi-urban areas is well-addressed by Muruganatham's model.
- Overall, Muruganatham's model by using a sustainable business framework offered livelihood, hygiene, dignity, and empowerment to women across the world.

Arunachalam delivered over 225 such machines in 14 states of India that are functioning well. In addition, enquiries from countries like Nigeria, Ethiopia, Kenya Uganda, Nepal, and Bangladesh are continuously pouring, however, he does not want to make it commercial. His business model involved women as partners and not workers. He encouraged the SHGs and NGOs to start manufacturing pads by purchasing this machine; he trained them; he even started a training school for girls how to manufacture this product.

Besides the award from the National Innovation Foundation, he won the national award from the President of India in 2009 and was named as one of the most "influential people" by the TIME magazine. Though he owned the patent for the product, he did not want to sell this to the MNCs as he was not interested in supernormal profit. The MIT USA ordered the machine for Bangladesh and African countries, which were a great honour for Arunachalam. The machine-making unit would employ about ten women and produced about 200–250 pads per day to be sold, per pad at Rs. 2.05. The promoter of this machine wanted to empower rural poor women. He also assisted the community in waste disposal projects. However, the government of India started the process of public–private partnership with the MNCs they excluded Arunachalam's project; but included some SHGs for this purpose. Jayashree partnership with state and municipal health departments, corporates such as Jindal Steel, Essar Steel, Moser Baer, and Bosch have collaborated with Jayashree to promote micro-entrepreneurship.

This case study demonstrates an innovative social practice that emerged from centuries-old societal customs in which taboos, superstitions, and beliefs were connected to women's menstrual cycles; during this time, women were denied a healthy existence because they were viewed as "impure". It was almost like a disgrace or a curse for women. Elders in the community and families reacted harshly and with social animosity to any attempt to even discuss the issue, much less modify the practice. Ironically, females are often not permitted to attend school in rural areas, and even when they are, they are not permitted to do so on days when they have their periods. Arunachalam's determination to find a solution led to a social invention; he created a low-cost machine to make sanitary pads for underprivileged women. In reality, every obstacle just strengthened his will to find a solution because he was a social entrepreneur. There was no turning around. It is a subject of social innovation since in 1998, there were items from the big industries in the organized sector, and he desired affordable product alternatives that were designed locally. Therefore, as per the strategic management theory, he had the option of choosing either the Blue Ocean or Red Ocean strategy. In the Blue Ocean strategy, an enterprise

produces and markets new products in new markets where the rules of the game are unknown. In the Red Ocean strategy, an enterprise produces and sells existing products into existing markets where competition rules are known. However, in this project Jayashree Industries, the challenge was to introduce a new product at an affordable price to the existing market. This project is a social innovation because it addressed the need for poor women and girls in the bottoms of the pyramid markets.

36.6.2 Aakar Innovations

36.6.2.1 About Aakar Innovation

Aakar Innovations originated in 2011, a venture by Social Entrepreneur Mr. Jaydeep Mandal, established with a vision to create responsiveness about access to affordable, high-quality, and environmental menstrual hygiene product, thereby empowering and enabling women and girls to earn sustainable livelihood. Aakar is a hybrid social enterprise that focuses on social innovation and social impact creation by involving local women entrepreneurs in producing, distributing, marketing, and sales of affordable environment friendly sanitary napkins. Rural women played a role in changing social value system that were deep-rooted, change in belief, perceptions, and attitudes of society towards menstruation as a social stigma in India.

Aakar Innovations works extensively towards the awareness creation and sensitizing the adolescent girls of villages on menstrual hygiene management. Since then at Aakar, innovation has been a continuous process, constant improvement within the social enterprise and social problem.

36.6.2.2 Social Innovation at Aakar Innovation

Social innovation was always encouraged at Aakar Innovation. Continuous technology evolution helped Aakar Innovation to pioneer in manufacturing India's decomposable sanitary napkins. Being innovator at heart, the Social Entrepreneur Mr. Jaydeep Mandal learnt the skill of manufacturing low-cost sanitary napkins and gradually designed a technique to manufacture Anandi—India's first fully compostable napkins.

Anandi is manufactured by using sustainable local agri-waste. Anandi pads are natural with super absorbent capacity and are decomposed within 90–180 days. Anandi was registered under the brand name of Aakar Innovation. Anandi is spreading its wings and became a preferred choice of many national and international communities.

36.6.2.3 Social Value Creation by Empowering Women at Aakar Innovations

Aakar Innovation ensured that they uplift the women conditions by influencing the social and economic change. Aakar is instrumental in reducing poverty by means of giving employment to local community women. Team of Aakar Innovations trained women in manufacturing the compostable sanitary napkins. The direct employment to women leads to increase in disposable incomes of the local families. The social enterprises also work towards educating women and adolescent girls on MHM. Statistically, over 355 million menstruating women in India, out of which 71% of girls reported to have no knowledge about menstruation until they get their first period.

Further, Aakar Innovation also addressed the problem of drop out of adolescent girls from the schools once they reach the puberty age, since menstruating girls or women don't have access to toilets or proper sanitation to maintain the hygiene. Lack of proper sanitation facilities and support to manage their private hygiene lead to reduction in girls from the schools. Aakar, through their awareness drive and low-cost sanitary napkins, ensured that the girls of the community are not deprived from their education.

36.6.2.4 Social Impact by Aakar Innovation

According to Aakar Innovation's website source, the enterprise influenced the lives of 1 million + women and girls as consumers. Various social programmes and drives lead to creation of menstrual hygiene awareness (MHM), 100,000 girls and women were reached through awareness programme. Importantly, Aakar Innovation established 600+ production units managed by women entrepreneurs. These units generated revenue of INR 20 million. A total of 300+ women are engaged in sales that lead to creation of disposable incomes of 300+ families.

Commendable efforts of Mr. Jaydeep Mandal and his team sets the real-life example of community empowerment. Aakar Innovation's mission and vision, in all possible sense, are contributing in bringing a social change.

36.7 Research Study Observation

- a. Social entrepreneurs may differ significantly in their demographic characteristics however; they seem to be similar in their leadership style. The leadership typology followed by a social entrepreneur is of an ethical leader who practises ethics, serves as ethical role model, and enforces clear standards in his enterprise.
- b. Social enterprises thrive to establish a balance between ethical, transformational, and empowering culture and leadership that foster employee satisfaction, motivation, and intention to participate (Heinecke et al. 2014). Importantly, along with leadership expertise, the sustainability and survival of social enterprises are

dependent on its ability to meet the social needs of the vulnerable communities and that is influenced by the external policies.

- c. Social enterprises anticipate this change and strengthen the capacity of the rural community by creating sustainable livelihoods. Similarly as reflected in UNDP Equator Initiative Cases as well, Adhikari (2006).
- d. Social enterprises in this process of social value chain creation ensure that women are self-reliant since she is the most vital source of economic self-sufficiency.
- e. The social impact of SE usually delineates the cause and effect chain, input to output, outcomes and impact of the activities employed. For SEs it is challenging to translate the social impact activities into social return on investment (SROI).
- f. SEs are recognized as non-profit organizations generating social value through financial discipline, social innovation, job creation, training, etc. Therefore, social enterprises evolved as an organization that solves social problems through voluntary involvement of local stakeholders. This wide range of community participation involves a moderately high informal approach leading to civic governance. The social enterprise process involves the integration of various conventional and forward looking research-based study on social innovative ideas that typically is viewed in social entrepreneur's behaviour.

36.8 Conclusion

These cases illustrate that how a person's own life experience led to the formation of a project idea. In a given social structure dominated by religion, dogmas, superstitions, cultural beliefs, social rigidities, a person was not supposed to know more about it, much less talk about it. The main lesson that can be learnt from this genesis is that a project concept and idea can emanate from any source, and the real entrepreneur is one who gives further shape to this idea. Also, when the idea emanates from one's personal life, in particular, it serves as a powerful motivator leading a person to know more about the problem and do something about it. Many persons may get an idea from personal life, but how many can pursue with indomitable will? Another lesson is, in this case, the entrepreneur adopted a mission to solve the problem which was based on his understanding that the problem has a potential solution. Like other entrepreneurs, social entrepreneurs did not want to be a part of the problem, rather a part of the solution. Therefore, once an idea manifests as a mission, an entrepreneur can pursue it in a full-fledged manner.

Social enterprises, social mission, and a right set of enterprise frequently act as an intrinsic reward to the volunteer or community members leading to community impact. The enterprise's efforts are directed towards community empowerment through community involvement in production, marketing, selling, and other functional areas. Therefore, the formalized social mission and social goals support SE leaders and managers in achieving the set results and also to what they should be held accountable for. Generally, a social entrepreneur with his capability and competency

makes sure that his social enterprise is adaptive to the rapidly changing local need and problems, dealing with the issues of social exclusion, etc.

Further, there is a growing consensus to address social issues narrowing the focus to profit maximization. SEs have to ensure economic sustainability through market-centred activities, the activities that are largely through donations and public contributions.

Finally, social enterprises irrespective of their typology (mutualism, spinoff, trading, or new) follows the community development pathway through social wealth creation. Elements of trust, network, civic governance, voluntary participation, and reciprocity are deep-rooted in social enterprises. This indicates the building of social capital, though difficult to measure but still they do lead to the systemic creation of an enterprise. The research study also suggests that the social enterprise's origins differ geographically, demographically however all are similar in their approach to be socially constructive, impactful, innovative, adaptive, and empowering. The pathway to social value creation utilizing ethical, accountable, transformational, disciplined and integrative. Social enterprises thus tend to have a complex yet community-focused social mission and social goals linked to social capital building. In short, the future of social enterprises largely depends on strengthening social entrepreneurship, which is the backbone for social wealth creation. Public policymakers by mobilizing and incorporating social inclusion, association building, civic commitment in public policies can ensure a strong social entrepreneurship process.

36.9 Suggestions and Future Scope

Based on this study and related findings, it is suggested that SEs can benefit from SHG support because the primary SHG principle is the empowerment of women through increased employability, self-sufficiency, and instilling a self-care habit as well as financial independence among rural women. A considerable shift in mindset, a change in working methods, and the challenge of vested interests are all necessary components of empowerment in the microfinance service sector as well. According to the research, SHGs are effective in rural regions, particularly among women. The rural woman has benefited from these programmes, both economically and socially. Since women play a crucial role in the nation's economic growth, the government should place equal emphasis on the contributions that women make to society and on ensuring their welfare. Social entrepreneurs are essential for the development of communities. It is possible to use their drive to see change in communities to bring about a new equilibrium that will benefit many people and address social challenges. Thus, social companies can assist in having social aims related to generating social capital as well as a complex yet community-focused social mission. It is recommended that future study should focus on core issues that can practically enable feasible women empowerment in the areas of financial sustainability and economic upliftment of women.

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Part VIII
Future of Work

Chapter 37

Effects of Online Training Design and Training Environment on Training Transfer During Covid 19



Dhruba Kumar Gautam , Dinesh Basnet , and Abhilasha Rayamajhi 

37.1 Background

The government of Nepal imposed a lockdown due to the coronavirus pandemic from March 24 to July 21, 2020, in the first phase (Kumar 2020, August 24). Since then, coronavirus cases in Nepal increased at an alarming rate. According to the World Health Organization (WHO) as of July 22, 2022, there are over 982,719 confirmed cases of COVID-19 in Nepal and 11,954 people have lost their lives (World Health Organization 2022, July 22). The coronavirus global pandemic has made the economy very weak and it is deteriorating every day. The World Bank has predicted that the growth rate is expected to grow by 3.4% in the current fiscal year and 4.1% in 2023 (The World Bank 2022, January 11). This is a very gradual economic recovery. However, every bad situation also has some positive aspects. For instance, all the classes and training during the pandemic shifted online. This has led to the trend of online training among institutions and organizations. Every day numerous presentations, workshops, seminars, and various forms of training started happening around the world and Nepal is no exception. People in Nepal are becoming more tech-savvy not willingly but forcefully due to the current situation. In this light, the study aims to find out how effective these online training designs and training environments have been and also inquires how effective the training transfer has been.

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Training transfer has been the subject of concern after the work by Baldwin and Ford (1988). Since then, a number of research has been done and found various root causes of training transfer. But unfortunately, after the outbreak of COVID-19, many organizations' patterns of doing work have been changed. As a result, the performance of organizations is not as expected and even some organizations have been shut down. Subsequently, many organizations are providing online training to their employees to overcome this crisis and to enhance their performance, but the effectiveness of online training is questionable and rare research has been done to understand training transfer through online training design and online training environment during the pandemic. Factors affecting online learning such as physical environment and Internet connection come into play especially in the context of a developing country like Nepal because they affect the effectiveness of these classes (Subedi 2020). Realizing these facts, this study directed the question as—in what ways do online training design and training environment affect training transfer in the Nepali service sector? The researchers select the service sector as it is the largest sector in the economy (National services policy review 2011). Since 1990, the share of service in GDP, particularly in a developing country like Nepal grew from 46 to 50%. In other words, 35% of total employment is accounted for service sectors (National services policy review 2011). More specifically, education institutions and banking sectors are focused in this research because those organizations are providing maximum online training to their employees during COVID-19. Therefore, anyone who is not working within these sectors is unrelated to these sectors and does not fall under the scope of this research.

37.2 Theory on Training Transfer

A model of the transfer process is the theoretical ground for this study which introduced the framework including trainee characteristics, training design, and work environment that leads to training transfer (Baldwin and Ford 1988). Their model of training transfer is the most frequently cited as noted by Brown and Sitzmann (Blume et al. 2010).

37.3 Training Transfer

Training transfer has been emerged during the late 1950s (Bell et al. 2017), and it is the degree to which employees can apply the knowledge and skills learned in training to the workplace (Brinkerhoff and Apking 2001).

Different researchers have identified various antecedents for training transfer. For instance, social support (Baldwin and Ford 1988; Facticeau et al. 1995; Reinhold et al. 2018), individual characteristics (Lim and Johnson 2002; Velada et al. 2007),

and motivation (Gautam and Basnet 2020; Noe and Schmitt 1986). Previous empirical evidence has found some mixed findings regarding the transfer of training. For instance, Blume et al. (2010) found a positive association between transfer and predictors such as post-training knowledge, cognitive ability, conscientiousness, motivation, and a learning goal orientation. On the other hand, external locus of control and agreeableness negatively influence training transfer (Blume et al. 2010). There are no consistent findings with a transfer of training; hence, more research is needed on training transfer. In this study, the researchers tried to understand training transfer from online training design and training environment perspective.

37.4 Training Design and Training Transfer

There is no single definition of training design. Researchers refer to training design depending on content, culture, and situation (Holton III 1996). For this study, training design refers to “the extent to which training has been designed to give trainees the ability to transfer learning to job application” (Bates et al. 2007, p. 205). Different researchers have developed different training design factors that influence training transfer. For instance, transfer design (Holton III et al. 2000), goal setting (Gist et al. 1990), and delivery methods (Lee 1998). In this present study, online delivery methods are suitable for training design because all the participants had taken online training. Delivery methods include lectures, demonstrations, interactive discussions, and tutorials (Lee 1998). During COVID-19, it is crucial to understand whether the delivery method helps employees to achieve state objectives and can transfer back to their work or not. It is significant to identify training needs analysis, objectives of the training, training situation, and constraints before delivery methods are selected (Lee 1998). Prior research has found that there is a direct relationship holding between training design and training transfer (Velada et al. 2007). Therefore, it is significant to incorporate training design to increase training transfer. Based on this literature, we hypothesized that:

H1: *Training design is positively associated with training transfer.*

37.5 Training Environment and Training Transfer

Prior research has found that the training environment positively influences training outcomes. (Baldwin and Ford 1988; Haertel and Walberg 1988; Velada et al. 2007). Different researchers have recognized that environment is a powerful influencer for individual learning and behavior (Lee 1998). The training environment includes furnishings, location of the place, lighting, temperature, workspace, and available resources (Lee 1998; Tessmer and Harris 1992). Moreover, for this study, Internet stability, availability of resources, and training platforms (i.e., Zoom, Microsoft

Teams, and Google classroom) were considered as the training environment. Rare investigation has been done focusing on online training environment and training transfer. However, the researchers believe that a virtual training environment has a positive impact on training transfer. Based on those shreds of evidence, the proposed hypothesis is:

H2: *Training environment is positively related to training transfer.*

37.6 Research Design

This study followed a positivist research approach to analyze the impact of online training design and training environment on training transfer. A causal research design has been used to look at the impact of predictors on training transfer. The research plan for this present study was a survey which includes setting objectives, designing the study, using reliable and valid instruments, administrating the survey, collecting and analyzing data, and interpreting the result (Sekaran and Bougie 2016). The study setting was field study and the time horizon was one-shot study (Sekaran am Bougie 2016). This study has used individual unit of analysis as individual responses were collected from the education and banking sectors of Nepal.

37.7 Measures

In this study altogether 13 items were used. The independent variable training design and training environment were measured with seven items and three items, respectively, which were not previously established scales but for this study, some items were taken from Lee (1998). A sample item to measure training design is: “The delivery methods were effective for learning the course content”. Similarly, an example of an item to measure the training environment is: “The Internet connection was stable”. The dependent variable training transfer was measured with three items (originally six items) (Xiao 1996). An example is “Using the new knowledge, skill, and attitudes (KSA) has helped me improve my work”. All variables were measured using a five-point Likert scale.

37.8 Sample and Data Collection

Data were collected from 210 trainees randomly. Cooley and Lohnes (1971) recommended 200 subjects for any kind of regression. Similarly, Guilford (1954, p. 205) recommended more than 200 for factor analysis. And, structural equation modeling is the blend of factor and regression analysis. Hence, it can be inferred that the

sample size used in this study (i.e., 210) is sufficient for variable analysis. Moreover, respondents were first asked to rate the independent variables, and one week later same respondents were asked to rate the dependent variable to mitigate the risk of common-method bias (Podsakoff et al. 2003).

37.9 Respondents Characteristics

In the study, a total of 210 respondents currently working in the service sector, particularly in the education and banking sectors from Kathmandu were surveyed. These respondents had to take online training during the pandemic. The demographics include organization type, gender, age, qualification, position, earnings per month, and application used for the training. The male and female ratio was almost equal. About 54.3% were male, whereas remaining were female. The majority (34.8%) belonged to the 25–30 age group, whereas only 1.4% of people belonged above those 45 years of age. Approximately 56.7% of the respondents had a master's degree, almost 29% had a bachelor's degree, only 4.3% had studied up to higher secondary and 10% had qualifications above a master's degree. About 23% of respondents were managers and officers each. 11% were lecturers. Similarly, 7.1% were faculties. The remaining respondents were either at the assistant level, associate professor, and professor. 34.8% of the total respondents earned Nepalese Rupee [NPR] 25,001–50,000. 16.7% earned between NPR 50,001 and NPR 75,000. Exactly 20% earned more than NPR 75,000. Finally, 28.5% earned up to NPR 25,000. Zoom was the most popular platform for taking online training. 71.9% of the total respondents had taken online training through Zoom, 18.6% used Microsoft teams, 4.8% used Google classrooms and 4.7% used other platforms for online training.

37.10 Preliminary Analysis

Training design and training environment constructs are not previously established scales. Hence, for content validity, experts' opinions were judged as suggested by Hair et al. (2014). All the respondents were Nepali-speaking employees. Hence, the questionnaires were translated into Nepali and was verified by management experts and English expert for face validity. The main purpose of translating English questionnaires into Nepali questionnaires is for making the same sense between researchers and respondents. Moreover, a pilot test of 15 respondents was conducted and found acceptable reliability of three variables. Initially, 218 samples were collected and 8 outliers were removed by using Mahalanobis distance. Moreover, linearity, normality, and homogeneity were examined, and found satisfactory results for further analysis.

37.11 Exploratory Factor Analysis

It is necessary to extract the factors as the exogenous variables of this study are not previously established scales (Hair et al. 2014). As a result, exploratory factor analysis was conducted. Table 37.1 indicates that sampling is sufficient (Kaiser–Meyer–Olkin (KMO) = 0.906; $\chi^2 = 1549.99$; $p < 0.001$) and appropriate for exploratory factor analysis. Moreover, principal factor analysis (PFA) was carried out on three constructs. Moreover, eigenvalues greater than 1.00 were extracted in this study. For exploratory factor analysis, absolute values below 0.50 were suppressed. One item of online training design, three items of the online training environment, and three items of training transfer were dropped from the scale. As a result, three factors emerged without the issues of convergent and cross-loading as given in Table 37.2. Dropping off seven items increased alpha value, model fit, and support for convergent and discriminant validity. Moreover, the communalities of every statement are greater than 0.50. In addition, anti-image correlation diagonals show that all the diagonals values are greater than 0.60 which also confirms that each item is valid for further analysis.

Table 37.1 KMO and Bartlett’s test

KMO and Bartlett’s test		
Kaiser–Meyer–Olkin measure of sampling adequacy		0.906
Bartlett’s test of sphericity	Approx. Chi-Square	1549.993
	Df	78
	Sig	0.000

Table 37.2 Principal component analysis with varimax rotation and reliability

	Rotated component matrix ^a			
		Component		
		1	2	3
Training design ($\alpha = 0.909$)	TD_1	0.669		
	TD_2	0.714		
	TD_3	0.682		

Principal component analysis with Varimax rotation method with Kaiser normalization. Rotation converged in 6 iterations

37.12 Reliability Analysis

Cronbach alpha (α) was calculated to assess the internal consistency reliability of the three variables. The Cronbach alpha of the training environment which has three items is 0.808. Similarly, the three items of training design had alpha (α) 0.909 whereas the endogenous variable (i.e., training transfer) consisting of three items had reliability of 0.823 as given in Table 37.2. The minimum cut-off point for reliability is 0.70 (Hair et al. 2014; Nunnally 1978) and this study's measures aligned with Hair et al. and Nunnally's criteria.

37.13 Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) was conducted to examine model fit, convergent validity (internal consistency of each factor), and discriminant validity. For the internal consistency model: standardized loading estimates ≥ 0.5 ; composite reliability (CR) ≥ 0.6 ; average variance extracted (AVE) ≥ 0.5 ; and modification indices < 3.84 ; construct reliability > 0.7 (Bagozzi and Yi 1988; Hair et al. 2014) and this study fulfilled those criteria, hence, support for good construct reliability and convergent validity (internal consistency). CFA was carried out on AMOS 22 by using maximum likelihood estimation to identify whether any statement of the instruments is loaded into the intended factor or not. In a sample of 200 plus, a factor loading of 0.40 or above are significant (Hair et al. 2014). In this study, a series of CFA was conducted for significant factor loading. As a result, all the statements had factor loading above 0.60 as given in Table 37.3. Moreover, the measurement model showed the model is a good fit as given in Table 37.5. After a series of CFA, the measurement model provided support for the convergent and discriminant validity of study constructs. For construct validity—standardized loading estimates and AVE should be greater than 0.5 for adequate convergent validity.

37.14 Convergent Validity

In Table 37.3, average variance extracted (AVE) is greater than 0.5. Composite reliability (CR) is greater than 0.7. The CR of each latent variable was estimated because prior studies have mentioned that CR is more suitable for reliability test than Cronbach coefficient alpha (α) (as cited in Adil and bin Ab Hamid 2017). Moreover, CR is greater than AVE. Hence, it is confirmed that there is no issue of convergent validity. MaxR(H) is also called McDonald Construct Reliability and Hancock and Mueller (as cited in Adil and bin Ab Hamid 2017) exemplified, "Coefficient H describes the relation between the latent construct and its measured indicators... coefficient H is unaffected by the sign of indicators' loading, drawing information from all indicators

Table 37.3 Measurement model (CFA)

Factor loading	Standardized factor estimates	CR	AVE
<i>Training design</i>			
1. The delivery methods were effective for learning the course content	0.732	0.910	0.590
2. The lecture delivery method was appropriate to learn the subject matter	0.793		
3. The computer-based training (CBT) method was effective for learning the course content	0.749		
4. The technologies used were effective to understand the course content	0.713		
5. The multimedia was a useful way to present the material	0.806		
6. The video was an appropriate (or helpful) way to present the material	0.785		
7. The real-world examples used in online classes were useful to understand the course content	0.795		
<i>Training environment</i>			
1. The internal connection was stable	0.648	0.813	0.595
2. The resources were available when needed	0.791		
3. The training platform (Zoom, Google classroom, etc.) provided a suitable setting for learning	0.860		
<i>Training transfer</i>			
1. Using the new Knowledge, Skills, and Attitudes (KSA) has helped	0.734	0.827	0.615
2. The quality of my work has improved after using the new KSA	0.871		
3. I make fewer mistakes than before when using the new KSA	0.741		

in a manner commensurate with their ability to reflect the construct” (p. 213) which is also mentioned in this study.

37.15 Discriminant Validity

In Table 37.4, average variance extracted (AVE) is greater than maximum shared variance (MSV). Hence, no issue of discriminant validity. Moreover, the root square of AVE (i.e., 0.771, 0.768, and 0.785) is greater than the inter-construct correlation among variables. This also proves that there is no issue of discriminant validity.

Table 37.4 Discriminant validity

	AVE	MSV	MaxR(H)	TE	TD	TT
TE	0.595	0.507	0.840	0.771		
TD	0.590	0.507	0.912	0.712	0.768	
TT	0.615	0.476	0.847	0.480	0.690	0.785

Table 37.5 Model fit indices

Measures	Observed values of the model	Acceptable model fit	Acceptable baseline
χ^2	130.772		
<i>P</i>	0.000		
CMIN/df	2.109	Passed	< 3.00
RMR	0.043	Passed	< 0.08
RMSEA	0.073	Passed	< 0.08
CFI	0.954	Passed	\geq 0.90
GFI	0.915	Passed	\geq 0.90
IFI	0.955	Passed	\geq 0.90
TLI	0.943	Passed	\geq 0.90

The value of the goodness of fit index, i.e., CFI, GFI, IFI, TLI exceeding 0.9 and the badness of fit index, i.e., RMR and RMSEA lower than 0.08 indicate a good fit of the model (Byrne 2001). The results of this study indicated that the model had an acceptable threshold value as given in Table 37.5.

In Table 37.6, mean, standard deviation, and correlations were presented. The table gives 3.56, 3.12, and 3.37 as the mean value of online training design, online training environment, and training transfer, respectively. It indicates that online training design has the major contributing factor to training transfer. In addition, the correlations in Table 37.6 indicate the relationship among online training design, online training environment, and training transfer is positive and significant at the 0.01 level (2-tailed). Correlations results indicate that all the relationships between different study variables are in the expected directions. These analyses indicate that all the relationships are eligible to test the proposed hypotheses. Thus, structural equation modeling (SEM) was estimated to assess the association among online training variables.

Table 37.6 Descriptive statistics and correlation

	Mean	Std. deviation	1	2
1. Online training design	3.56	0.77		
2. Online training environment	3.21	0.93	0.614**	
3. Training transfer	3.37	0.80	0.601**	0.418**

Table 37.7 Summary of hypotheses testing results

Hypotheses	Estimate	S.E	C.R	<i>P</i>	Result
TT TD	0.726	0.124	5.855	0.000	Significant
TT TE	– 0.021	0.099	– 0.213	0.831	Insignificant

37.16 Structural Equation Modeling

In the present study, SEM was used to test the hypothesis as it measures all the paths simultaneously and it is a more robust test than regression techniques for hypothesis testing. Moreover, SEM is conducted only if model fit, reliability, convergent, and discriminant validity are confirmed (Fig. 37.1).

37.17 Summary of Hypotheses Testing Results

Based on the SEM results, Table 37.7 shows that one hypothesized relationship is positive and supported, whereas one relationship's finding is insignificant.

37.18 Discussion

Velada et al. (2007), Haertel and Walberg (1988), and many other scholars have done similar studies in the physical setting. For example, Velada et al. (2007) concluded that there is a positive association between transfer design and training transfer. Velada's study is consistent with this study. However, in this study, training design is focused on delivery methods for learning the course content and multimedia is used to present the content. Moreover, it also included real-world examples used in online classes and their usefulness to make the course content understandable. From the study, we can conclude that the training design used during online training made the training transfer more effective. If the delivery method for learning the course content, use of technology, and use of real-world examples were effective, then that online training or workshop was effective. However, if these elements were missing then the online training was not effective.

Haertel and Walberg (1988) prove that the classroom environment positively influences learning outcomes. However, this study is inconsistent with Haertel and Walberg's findings. This study shows that there is no relationship between the online training environment and the outcome variable. One of the possible reasons could be that while taking training, the employees are more focused on their devices

Table 37.8 Comparing and contrasting of this study with prior findings

Prior findings		Findings of this study
Author(s)	Findings	
Chauhan, Ghosh, Rai, and Kapoor (2017), Velada et al. (2007), Muduli and Raval (2018)	A positive relationship between training design and training transfer	Consistent with previous findings. A positive relationship between online training design and training transfer
Haertel and Walberg (1988), Xiao (1996), Muduli and Raval (2018)	Work environment positively influences learning outcomes	Inconsistent with previous findings. There is no association between the training environment and training transfer
New on this study		
Online training design positively influences training transfer		
Online training environment has no impact on training transfer		

(i.e., laptops, mobile). Hence, the noise level, sitting, light, and other resources did not have a greater impact on training transfer. In addition, this indicates that the platform of learning (Zoom, Google classrooms, Microsoft Teams, and others) did not make any difference in training transfer.

Online training and workshops were taken at the respondent’s own will and they are comfortable in their own space. The finding shows that the Internet was moderately stable. Hence, it can be said that most people make use of *Nepal Telecom* and *Ncells* data packages which are available at reasonable rates which is an important factor for learning and transfer. The summary of theorization is shown in the following Table 37.8.

In a nutshell, this study shows that organizations must create effective online training design for training transfer. As a new method of online learning, this study gives evidence for the effectiveness of online training.

37.19 Implications

The implication of this study can be useful for different stakeholders like management, human resource departments, general service departments, government and policymakers, and researchers for further studies and investigation.

The finding of the study suggests that organizations should strengthen training design which includes lecture delivery methods, technologies used, and appropriate video material connecting to the real-world environment before conducting online

training. Moreover, from a broader perspective, the government should invest in creating infrastructures that support strong Internet connections not just in the valley but throughout the country. Without a strong Internet connection that is reliable and accessible, online training cannot be effective. Therefore, the government and concerned authorities need to enhance the connection and speed of the Internet.

Various social factors also come into play when we discuss online training. Not everyone has the privilege of a separate room or environment where they can focus on online training. Some families live in one or two rooms. In such a scenario, some problems occur while attending online training. Participants cannot openly interact because there are noises in the background like the sound of a pressure cooker, a child crying or cattle mooing which could have a significant negative effect on training transfer. Hence, the organizations could support the participants in a better setting environment.

37.20 Future Course

Management, human resource, and general service department are mostly involved in choosing resource persons and topics for the online training. However, they are not much concerned about what the employees seek to develop. While filling out appraisal forms, employees do submit what they want to improve and how it would benefit them. Hence, future researchers could investigate detail in terms of training need analysis before conducting training. In the Nepali context, it is seen that it is the supervisors in most cases who decide on who goes for what training.

This study is limited to only the education and banking sectors. Future researchers can do similar research in other sectors as well. In addition, this study found that the online training environment does not have an impact on training transfer and it is not consistent with the prior research. Hence, future researchers could conduct qualitative studies like in-depth interviews, focused group discussions, and participant observations to identify the reason for not accepting the hypothesis. The scale was validated in a developing country like Nepal. Future researchers could use the same instrument to validate in different contexts and different training settings. All the data were collected from the same employees and to mitigate the common-method bias, supervisors might be asked for trainees' performance. Therefore, future researchers could use other sources for data collection.

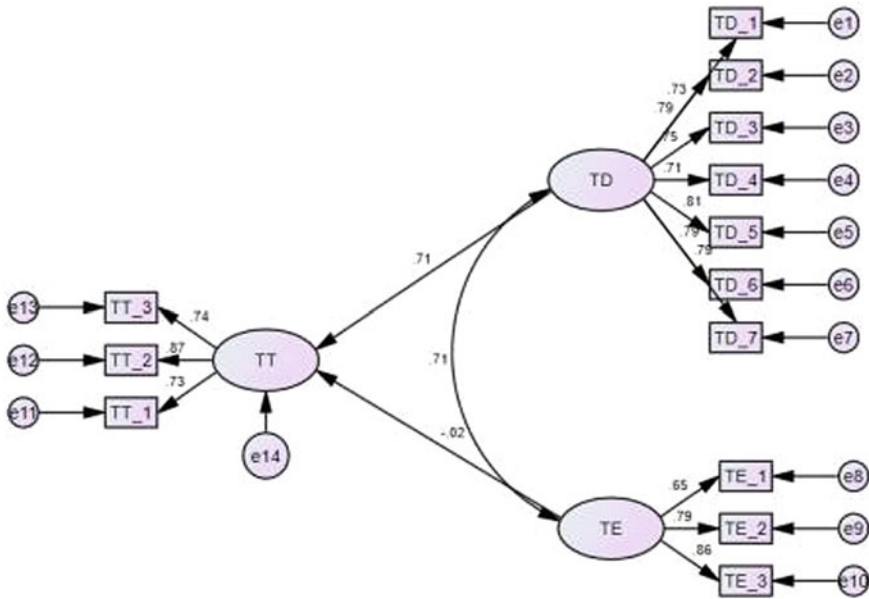


Fig. 37.1 Structural model. *e.* TD = training design, TE = training environment, TT = training transfer

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Chapter 38

Sustainable Work Place—Pursuit of Future Work Space



Nimmi P. Mohandas and Lishin Joshy

38.1 Introduction

The term ‘future of work’ is about how work, workers and workplace will change and evolve in future. The main elements worth considering in this regard are what the work is going to be, how it will get done, who will do it, when and where. The answer to the first question is far from clear, as it is believed that ‘85% of jobs that will exist in 2030 have not been invented yet’ (Society for Human Resource Management). The ‘how’ and ‘who’ aspects are intrinsically interlinked; the work will be carried out by an eclectic mix of ‘workers’: full-timers, part-timers, contract-wagers, freelancers, robots and machines that are intelligent. It follows that the optimal way to get work done will be through the collaborative efforts of men and machines. Thus, the talks about AI replacing employees are now passe. It is being increasingly believed that the most successful companies of the future would be the ones that exploit the synergies of a man–machine combination. ‘When’ and ‘where’ are likely to be more flexible than what they are now. The COVID pandemic has already set the ball rolling, and work anytime from anywhere is expected to be the norm in future.

There is another school of thought, according to which, new technologies like machine learning, artificial intelligence, virtual reality and robotics can lead to job losses and consequent public turmoil (Bhattacharyya and Nair 2019). According to Autor and Salomons (2018), though automation has not led to labour displacement, it has definitely brought down labour’s participation in adding value. Arntz et al. (2016) are more optimistic in this regard and hold that only one-tenth of jobs are under pressure from automation. According to them, entire job roles are not likely to be automated, and it is only particular tasks within each job that are fit for automation. Other researchers too have opined that differences in the composition of jobs and

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how the component tasks are organised within the jobs have a bearing on whether the job/task is a potential candidate for automation.

Changes in economy, technology, social fabric and demography generate new demands for organisations (Stone and Deadrick 2015). According to Maniyaka (2017a, 2017b), technology is being able to spot patterns in numerical and other data, and this can have very serious implications as far as jobs are concerned. Despite the increasing number of academic articles and information reports on the topic of the FoW (Stoepfgeshoff 2018), there is still a scope for development in this research field (Bhattacharyya and Nair 2019; Stoepfgeshoff 2018). Studies could be developed from the perspective of stake holders who are to thrive in the new environment. Our study is one such attempt to fill the research gap on how prospective employees foresee their work environment in the future and what are their expectations.

Our research question concentrates around the central theme of

- (1) What are the expectations related to future work spaces?
- (2) What is the general sentiment around future work trends?

We have used a new method of mapping themes extracted from reports prepared by new hires and seasoned employees. The data, which was qualitative in nature, was subjected to a sentiment analysis using NVivo software. Subsequently, manual text analysis was undertaken using MS-Excel to identify core themes. Our findings provide a graphical view of the future of work.

38.2 Literature Review

The discussions over future of work have been discussed since the dawn of this millennium (Malone 2004). Discussions have been developed on matters pertaining to post-COVID era (Malhotra 2021); technological advancements (Maniyaka 2017a, 2017b; Howard 2019); gender perspective (Attard and Dimitriou 2022; Cahill et al. 2023) and so on. Very few works speak about work itself (Malhotra 2021). Author talks about how COVID-19 pandemic has accelerated the changes in work environment and work collaborations. Mwangi (2022) talks about how individuals should place their goals. The work discusses about methods by which organisation could manage their employees in future (Mwangi, 2022). Studies have come up discussing sustainable work cultures and careers too (Hamzah et al. 2022; Gubbins and Garavan 2022). Grimshaw et al. have discussed on how to fragment work research programme pertaining to each industry concerning digital platforms. But no prior studies have looked into how employees in general perceive the future workspaces and how they wish to shape their careers in future.

38.3 Theoretical Focus

A career ecosystem or work ecosystem is created by an interplay of many factors like individual, organisation, national policies, technologic and labour market, and this ecosystem is maintained by the interdependencies of the various entities involved in it. Career ecosystem (Baruch 2013) defined as ‘a social system of employment and career-related development and opportunity that emerges from interdependencies among actors or entities, including individuals, networks, firms and social institutions’ (Baruch and Rousseau 2019, p. 92; Gribbling and Duberley 2020; Donald et al. 2018). The developments happening in this dynamic environment is a by-product of the perceptions of individuals involved in the system. As any work setting depends on the interdependencies of individuals, economies, institutions and global job markets, career ecosystem framework is mandatory to understand the nuances of new work system. The future employees devise a system that most suits their level of enthusiasm and ownership. Further in future, we ought to see the developments as envisaged by today’s youth as individuals ought to work on perceptions than reality. Fact is that people try to bring these perceptions to reality.

38.4 Methodology

The study followed a qualitative enquiry on perception of freshmen and experienced employees on future of work. Qualitative study is incredibly diverse, complex and is considered as a foundational method as it enhances thematising meanings. So here the study can be established across range of theoretical disciplines. The theoretical freedom a qualitative enquiry enjoys lets the researcher provide rich and detailed account of data. Data corpus of this specific study consists of the transcripts of 40 students who wrote brief account of their perceptions and expectations of future of work and the scripts from 20 experienced employees.

38.4.1 Participants

Participants consisted of 40 freshmen of a management programme and 20 employees who work at senior level positions in many organisations in Kochi. The age of students ranges from 19 to 25, and those of employees range from 41 to 52. The student cohort consists of 45% female and 55% male. And the employee cohort consists of 37% male and 63% female.

38.4.2 Analysis Strategy

A general introduction to the purpose of research was communicated to the respondents, and they were asked to give a write up on the topic of the research. There were no hard and fast rules regarding the replies, and the respondents were given full freedom in this regard. The transcripts received were in English and were validated by the authors. Two master files were created from the reports, one for freshmen and one for experienced. The transcripts were subsequently loaded into the software NVivo (Version 2022) separately to conduct thematic analysis because it offered transparency and flexibility to code and retrieve data quickly. Later the authors manually went through the transcripts and created general themes based on iterated reading and coding.

38.5 Results

The general sentiment towards future of work is neutral (Table 38.1), followed by positive. From the sentiment analysis it was found that the tone of the messages was neutral, neither too optimistic nor overly pessimistic.

Table 38.1 Sentiment analysis



Five major themes relating to research questions were identified. Each theme begins with a definition, since defining the themes is a vital part of the transparency and replicability of thematic analysis. Discussions were centred around the following themes. The following are the areas, where prospective employees wish to see some transformation.

1. Work Space

Majority of student discussion on work space is associated with the changes that they aspire to see with the new work spaces. Work space is the environment which the employee interacts with. Primary environment includes the office space and immediate colleagues, and outer/secondary environment consists of employees within different verticals and managers.

The freshmen appreciate the idea of virtual workspaces and robotic assistants (Cobots), and they are willing to work in a hybrid mode. They wish the organisations were having flat structures and that work boundaries are eliminated.

..... Workplace modifications include Reduction in hierarchical levels by overhauling the organisational structure, bringing down organizational boundaries, improvement in sophistication of management tactics and widening of perspectives, and finally, improved workplace conditions and employee health.....

The evolving content of job roles was mentioned enthusiastically by the participants. As time goes on, and as technology develops, new job roles and job positions open up and the prospective employees understand the importance of getting updated with changing requirements, foreseeing them and predicting them. The freshmen appreciate the dependence on gig works as it provide a lot of free space for the system to evolve. The human–computer interaction aspect is highly appreciated by the respondents, and they look forward for the collaboration in a positive manner. Introduction of robotic environment could enhance productivity and efficiency in a positive manner, within the boundaries of sustainability.

.....As we can see the farmers went to work in the factories instead of agriculture land. The factory workers moved into various service occupations. The retailers have been transferred to personal care role... the mode of working, the locations from where the work will be executed, who will be undertaking the tasks, who will remote control the workers, how, and how effectively, will experience a change in the gig economy The future of work will be very much flexible for the workers in terms of their working environment and also technologically it will bring a new innovated world for all of us. It is expected to depend heavily on creative innovations - and organisations that go for the right innovations will be able to create competitive advantages and positive working environments. Furthermore, such innovative solutions will increase worker productivity.....

The chances for gig work and work flexibility are enthusiastically shared by experienced employees. They feel that the hybrid work culture has invaded the corporate arena like never before. Prolonged work from home has not only changed the work environment and communications procedure, but it has a conspicuous effect on working hours, individual workload, food chain and working stratagem.

2. Careers

For being in future work force, employees need to possess many qualities. And as time changes, the priorities of employees also change. The viewpoints were such that they emphasis and value sustainability in career. Sustainable careers are those which offer employees a healthy, happy and productive worklife. Sustainable goals 2030 aims for careers which are productive and at the same time sustainable. Students imagine work from a whole-life perspective and would like to participate in work which makes them happy and contended rather than, in something which drains out all their energy. To attain sustainability, it is mandatory to have a long sightedness on future and their careers. Mostly employers ask potential candidates a question ‘where do you want to see you in next 5-year time’. Rather the job seekers should ask themselves this question and prepare a career plan that shall serve them with happy and sustainable careers.

In highly uncertain environment which is changing at warp speed ensuring performance is more difficult and more necessary than ever. Bauman’s argument, however, is that contemporary workplace uncertainties are of a ‘strikingly novel kind’—these uncertainties are a ‘powerful individualising force’.

The new ways of behaving at the workplaces are not going to fully replace the old styles anytime soon. The new practices grant greater freedom to employees as far as how to achieve what is expected of them. This will help them develop certain characters and behavioural styles that are actively sought after by others they are dealing with. New work ethics allows employees to practise their freedom and carry out their responsibilities and obligations.

..... It is waste of time, energy and effort for us to work without any satisfactory work environment and career building of employees. Many of our potential has been wasted due to regressive time and being overworked, because of this many of them have not been growing and are extremely frustrated and tired of this.....When coming to work only few people love what they do. Rest of them just continue as they don't have any other options. But both should handle the work pressure, and for the second group it's a bit tiresome job

..... After retirement it will be too late before we start living for ourselves. It's our golden period, our youth that we are missing out. We have only one life to live. We should explore all its possibilities.....

..... Not only the skill of the employees, but also the organizations must take new decisions related to the financial, mental and physical health of the staffs for the effective management of human resourceIn future people expects that organisaions will give importance to employee wellness wellness of employee's will be given more priority with additional leaves, healthier environment, relaxation areas, music etc.....

The transcripts highlighted that most participants demonstrated protean and boundaryless career mindsets (Nimmi et al. 2021). Protean attitude is associated with higher job satisfaction, subjective and objective career success, employability perceptions and future learning readiness. Job security is replaced by career flexibility and adaptability. The protean mindset creates more confidence in them and they create their dream career based on values and their preference.

..... People used to dream of a steady job. They spent their entire life in the same job like settlers. We should not be like that. We must be more like hunters, constantly looking for new opportunities and ready to do whatever that brings us to the top.....

The development of protean mindset is accompanied by an enhanced sense of importance the companies need to provide for employees. The experienced strata of respondents feel that the organisations need to take extreme care in nurturing and developing employees and retaining them.

..... Redefining the Employee Value Proposition with the expectations of the work force is the key for excellence in any work settings. The four key expectation of the future talent are: 1. Know Me, 2. Entice Me, 3. Develop Me, 4. Reward Me..... Thanks to the pandemic, the employee is fast gaining the same status. Yes, there is the aberration of a Twitter, a threat of a recession, but this is the era of the employee.....

3. Emotional and Creative Skills

The freshmen are quite optimistic on the use of human skills and how they plan to leverage the specific skill set to traverse job market demands. A few of the transcripts reflect as if they abhor the excessive usage of technology and they find these are not going to trouble them with their opportunities in future.

..... Computers and other machines will aid in saving time and effort, but cannot replace creativity that springs from the soul of a creative person. Also taking myself as an example, as I'm running a small business on gift products made of papers, I'll make those things with all my heart and love. And I could make things according to human emotions. And it is enough to satisfy my customers in all ways. But a machine could not do the same.....

Emotional Intelligence could help individuals while working.

Emotional intelligence considered one of the 'soft skills' and a desirable workplace attribute is defined as the ability to recognise, understand and manage our own emotions and those of others. People who are emotionally intelligent can easily recognise verbal and non-verbal cues and are highly skilled at effective communication. Teams consisting of such members often produce spectacular results, as they can understand their client's point of view better, work better as a team and handle stress and challenges without affecting productivity. Managers who are emotionally intelligent find it easy to motivate employees and to communicate effectively with them by articulating emotions accurately. Businesses that place emotional intelligence among its staff as a top priority is able to attract and retain talented professionals. According to the World Economic Forum, emotional intelligence is one of the top ten skills required for the fourth industrial revolution. The McKinsey Group is also of the opinion that the need for social and emotional skills will outpace the need for cognitive skills. A Harvard Business Review article has gone to the extent of saying that corporate cultures that lack emotional intelligence are in fact a liability.

..... Reducing the stress of the employees in work place is necessary to improve their performance. Emotional intelligence will help not only to manage emotions optimally, but also to understand how the display of emotions affects the focal person and others who deal with him..... The future of work is related to the combination of limited use of manpower and efficient utilisation of these modern technologies. It will result in more creative and intelligent work being carried out.....

4. Future Leadership

With the drastic changes that the organisational structure and nature of work is undergoing, there is a need to re-evaluate the idea of leadership. Leadership characteristics of yesteryears may no longer be relevant today. ‘One of the greatest changes in our business world is the transformation of an industrial-based economy into an information-based economy’, as a result of which it is crucial for leaders to leverage the intellectual capabilities of their employees to meet organisational objectives. Speed and efficiency have become important too in all areas of work, like say in responding to changes, and not only in reducing time-to-market. This requirement of speed, along with the need for continuous improvement, calls for a different kind of leadership style that requires additional and different skills and behaviours, especially when we are moving towards a team-culture. Leaders have to boost trust and togetherness because these two are essential for improving employee creativity and innovation.

...Future of work needs leaders full of optimism, capable of propelling human resilience and resourcefulness for embracing change and challenges. Company leaders are beginning to foster a culture of trust in their organizations, allowing them to become more transparent, compassionate, and vulnerable in their management styles. Great leaders bring out the best from their followers and facilitate high performance. Factors like distributer teams, increasing diversity and more fluid organisational structures.

The most important competencies and attributes cited by freshmen for leaders were adaptability, self-awareness, social skills, boundary spanners, collaborators and network creating.

..... A new leadership paradigm seems to be emerging causing a change from top-down, organization-centric communication patterns that are typical of hierarchical structures, to two-way communication styles that characterise collaborative leadership styles.....

Organisations are creating a leadership pipeline of managers capable of leading ‘creatively’ through turbulent times. During the pandemic period majority of organisations worked in a virtual environment. Virtual teams are composed of employees, who are at a distance from each other geographically or they may even belong to multiple collaborating organisations, but nevertheless are connected with the help of IT with each other in their pursuit of common goals.

..... There will be no face to face meetings instead the meetings will happen via virtual reality and augmented reality that helps in seamless sharing of ideas and brainstorming across time zones between several groups of employees in various locations. To manage these kind of work setting the organisations require a new set of leaders, virtual leaders.....

Virtual leaders play several vital and challenging roles. First and foremost, they act as a link between team members helping them to make sense of specific events and overall functioning of the organisation. Secondly, they provide the much-needed direction for actions of individual team members so as to ensure that different individuals are not working at cross purposes and to make sure that all activities being

carried out are in fact contributing in one way or the other to achievement of organisational goals. Finally, it is the duty of a leader to identify the right resource for the right task and to enable team members to perform at the desired level.

..... change in the attitude of people towards technology and automation and with better leadership this crisis can be turned into a great opportunity in which everyone can thrive towards success.....

5. Equality and Diversity

The Cambridge dictionary defines inclusiveness as ‘the quality of including many different types of people and treating them all fairly and equally’. Most employees characterise inclusion on two levels: their personal experience and the way they perceive their organisation more broadly. By on-boarding individuals coming from different social strata and backgrounds, and by opening up upward and sideways paths for movement within the organisation, the employer will be able to open up new and fruitful experiences for their employees.

..... Working in places that promote equity and inclusion is the way of the future while automation can sound scary, it can actually make work easier and workers happier, if it is well regulated.....

New technologies like analytics, big data and artificial intelligence are automating the routine works, but for augmenting these activities higher order social and cognitive skills of highly diverse workforce is required. This strengthens the urgent need to increase workplace inclusivity. Inclusive culture values employees leading to a feeling of belongingness and helps to create an environment that works for everyone. Inclusiveness at work ensures equal opportunities for all employees notwithstanding the differences in race, religion, gender, sexual orientation etc. Its embodies the idea that differences makes us stronger. The world of work is changing, and there is an opportunity to create new spaces and mechanisms for employees to be heard and seen in a new way, a way which fosters inclusivity with purpose. Equity is defined in the Cambridge dictionary as ‘the situation in which everyone is treated fairly according to their needs and no group of people is given special treatment’.

38.6 Discussion and Implications

The sentiment of the transcripts in general is neutral. Even though there are many previous studies showing an optimistic perspective towards future of work, the responses in this study reflected a neutral perspective towards the aspect. The reason being technology development and adoption is a continuous process. Even though the pace has changed the process is continuous. This would have smoothed the enthusiasm of the respondents. The five themes that has emerged out of the thematic analysis are changes in career, leadership, EDI, work space and emotion and skills. These are indicative of a sustainable and inclusive work place (Table 38.2).

Table 38.2 Themes generated

Themes	Careers	Leadership	Work space	Emotional and creative skills	EDI
Sub-themes	Work-life balance	Virtual leadership	Robots/virtual	Human labour	Inclusiveness
	Adaptability	Collaborative leadership	Gamified	EI	Diversity
	Flexibility	Skills and attributes	Health	Creativity	Equity
	Sustainability		Flat-structure		

A sustainable workplace established the goal of balancing the planet, people and profit to produce success and viability in the long term (Todd 2022). The themes are indicative of such an environment vis perspective on career (Theme 2), leadership (Theme 4), EDI (Theme 5), work space (Theme 1) and emotion and creativity (Theme 3). Previous work has highlighted the importance of remote working (Theme 1) (Babapour Chafi et al. 2021). The themes also generate on ideas on working with Cobots and organisations could how well collaborate with robots (Nimmi et al. 2021).

Likewise the presence of flat organisation structures is appreciated in previous studies. Study by Aleksic et al. found that hierarchy culture can be related to deviant behaviours and are less appreciated in future work spaces. Theme 2 that relates to careers reciprocates sustainable careers as developed by De Vos et al. stating the importance of happiness and satisfaction in life and career (Van Der Heijden and De Vos 2015; Van der Heijden et al. 2020). Gordon and Yuki (2004) in their work on future leadership have discussed how academicians and practitioners can collaborate effectively. Theory and academic research on leadership haven't focussed on strategic issues, on processes, and on the moderating effects of the environment as much as they should have. The presence of virtual environment and a more diverse work force requires specific leadership (Theme 4) qualities that need to be adapted from time to time.

38.7 Conclusion

The world is taking big strides in the area of AI and ML (artificial intelligence and machine learning) and in the promising field of robotics, and machines are frequently performing better than humans, at least in certain fields. This qualitative research study is one of the earliest studies of future of work on five different themes: workspace, careers, emotions and skills, future leadership, equality and diversity. The findings provide insights into advantages and disadvantages of the future of work and reveals a somewhat neutral way in which both freshmen and experienced

employees are viewing tomorrow's work domain in the context of advances in the field of artificial intelligence, robotics and information technology. The study looks into the factors that will shape the pace and extent of changes in the workplace as well.

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Chapter 39

An Empirical Study of the Impact of Organizational, Social, and Psychological Factors on the Performance of Employees



Krishna Kumar Singh, Charvi Vats, and M. P. Singh

39.1 Introduction

Performance analysis plays a vital role in determining future success in every field. In an organization, performance analysis becomes more critical as it helps an organization achieve its goals, leading to progress. Performance analysis is a broad topic where we can analyze the performance of various things such as the performance of machines, employees, techniques, and procedures followed. Among all these elements, the performance of employees in an organization is the most critical factor because, indirectly, the performance of other factors depends on employees' potential. Employees in an organization are the most valuable assets that drive the firm's overall growth, and performance evaluation is the most critical process to acknowledge the performance of employees. In performance evaluation, Human Resource Management plays an essential role. It estimates the need for Human Resources required in an organization, recruiting the right people and providing them appropriate development training. However, today the major challenge for Human Resource Management is to provide the proper training to the right employee at the right time, which should be in association with organizational goals. This is because

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the amount of employee data in databases is increasing day by day, and analyzing such a massive amount of data with traditional tools is getting complicated. As a result, the evaluation process of employees is getting affected. Due to these issues, managers keep performance analysis on the back burner. So, there is a need to use more advanced tools while analyzing the performance of employees. Data mining has evolved several methods and models that can perform analysis of vast amounts of data. The implementation of machine learning and data mining algorithms in HR analytics can improve the evaluation process to manifolds. This will help organizations speed up the evaluation process without compromising effectiveness and efficiency. Also, the factors chosen for evaluation significantly impact the evaluation process. Thus, one should consider all the essential factors that can significantly impact an employee's performance. The majority of organizations consider factors dependent on employees' abilities like communication skills, educational qualifications, teamwork quality, etc., that can affect their performance. However, other social and psychological factors are also crucial that organizations overlook but can significantly impact employee performance. These factors include workplace environment, convenient working hours, family circumstances, peer relationships, etc. These factors should be considered while evaluating the performance of employees because if the workplace environment is not healthy and proper, then an employee cannot perform to its full potential. Similarly, if the family environment or circumstances are not suitable for a particular employee, it will also affect his or her productivity. So, one should also consider these factors while analyzing performance. Also, another element that has room for improvement is the size of sample data, as the accuracy of any tool or model depends upon the data taken. If the data is too small, then the results of that model will not be that good and can sometimes lead to wrong results. So, one should choose the sample data which is large enough to generate appropriate results for their problem. Another thing that should be taken care of is pre-processing data while using an algorithm, as it is essential for getting good results and accuracy. Hence, the data selection is essential for any model to get appropriate output with reasonable accuracy. So, through this research paper, the authors have studied the impact of social and psychological factors and organizational factors that affect the performance of an employee. Also, the authors have suggested data mining and machine learning algorithms that can be deployed in order to get efficient and fast results. This will help companies provide the proper training and knowledge and take other appropriate measures to improve the performance of their employees that drives the future growth of any organization.

39.2 Literature Review

Human Resource Management is the area where every organization wants to invest because HRM is responsible for recognizing the competitiveness and effectiveness of an organization. HRM performs several vital roles like analyzing the performance of employees, providing them proper training when required, rewarding them, and

most importantly, ensuring a positive work environment for them. Till now, several conventional methods are being used by organizations for evaluating employees' performance; some of these methods are

Graphic Rating Scales: This method includes a list of duties, behaviors, projects, or competencies against which employees are given grades.

Work diary or log: Here, the employee has handled a record that contains the frequency and time involved in the tasks. Then, the manager analyzes those records, identifies the patterns, and converts them into responsibilities.

Self-evaluation: In this method, an employee analyzes his or her performance based on specific predefined criteria.

However, the increasing advancements in technology are also driving the use of new technology in Human Resource Management systems. Also, HR professionals' amount of data is increasing day by day. Hence, it becomes difficult for these conventional methods to deal with such massive data. This vast amount of data is driving the need for data mining research in Human Research. Several types of research have been done discussing the need for machine learning and data mining tools while evaluating employees' performance. Chein and Chen (2006) are some of the initial researchers who deployed data mining models to predict newly employed personnel's performance. They considered several attributes for making predictions to decide on whether a person is fit for the job or not. These features include Gender, age, experience, marital status, education, major subjects, and school. Through their research, they concluded that education, school tires, and job experience are the major factors that affect an employee's performance. In another paper, Sadath (2013) has discussed the implementation of data mining techniques for predicting employees' performance to make automated and intelligent decisions from large employee databases. She explained the importance of data mining by specifying the role of three subcategories of DM in performance evaluation: Association rule mining—used to match an employee's profile with the most suitable job role, clustering—group employees with the same characteristics, and classification—for making predictions of employee's performance. This research aims to deploy appropriate knowledge management strategies for enhancing the HRM performance evaluation system. Also, in their research, Kalaivani and Elamparithi (2014) have applied different classification algorithms for predicting the performance of employees in an organization. Specifically, researchers worked with Decision Tree algorithms, including an ensemble of Decision Trees for making predictions; these algorithms included C4.5, Bagging, and Rotation Forest. These algorithms generated a set of rules, specifying models of multiple classes. They concluded that Rotation Forest gives better accuracy than the other two models but the time taken in processing of Rotation Forest is more as compared to the C4.5 model. Through this research, they wanted to help organizations predict the performance of newly applicant personnel. Factors considered play an important role in prediction, and the importance of this is discussed in one of the research projects where Kirimi and Moturi (2016) tested several attributes affecting the performance of an employee like age, Gender, marital status, qualification, specialization, professional

training, experience, salary, designation, etc. They used Cross-Industry Standard Process for Data Mining (CRISP-DM) model to check the effect of these attributes on the performance of employees. Researchers modified the Generic KDD model to handle the multilevel and complex data and deployed ID3, C4.5, and Naïve Bayes algorithms for the classification process. The main objective of their research was to find the characteristics affecting the performance of employees the most, and for that, they used the concept of maximum gain ratio [6]. Another research done by Sarker et al. (2018) has applied data clustering techniques to predict employees' performance to help the HR department improve the decision-making process. They considered several factors for evaluating performance, including personality, punctuality, oral expression, etc., for studying the impact of these factors on employees' performance. They implemented *K*-means clustering to segregate employees into groups based on their performance quality and a Decision Tree algorithm to classify employees into four categories: Excellent, Good, Medium, and Poor by analyzing the past data. The main aim of their paper is to enhance the decision-making process of HRM in firms. With the advancement of technology, new advanced tools have been developed, and in order to enhance the productivity in companies, these tools have been deployed in various departments; the HR department also began experimenting with new technology to hire the right talent. Deekshitha et al. (2020) in their research carried out several experiments based on methods used in WEKA tool to help HR department of an organization to allocate right person for the right job and at the right time, by using data mining and machine learning algorithms. They constructed three important machine learning algorithms, which are Decision Trees (C4.5), Support Vector Machines (SVM), and Naïve Bayes, to find out the characteristics that are positively affecting the MOCA employees' performance. These models were built after deploying a 10-fold validation technique used for testing the classification process. After performing the experiments, they concluded that SVM was the most suitable method for predicting employees' performance at MOCA. Also, Jantan et al. (2011) attempted to find patterns in the existing data of Human Resource databases. They proposed the usage of different classifiers for finding these patterns. Once patterns are generated, these patterns can be used as a decision tool in the talent prediction of employees. They implemented three models in their research: Decision Trees (C4.5), neural networks, and *K*-nearest neighbor. They built these models based on 10-fold cross-validation and WEKA and ROSETTA data mining tools. After experimenting with each of these models, they concluded that C4.5 is the model that gave the highest accuracy of predictions. The main aim of their paper is to use the classification rules generated in predicting the talent among employees that will help decide the job role for a particular employee and help organizations in the selection process of employees. Valle et al. (2012) predicted employees' job performance in a call center using a Naïve Bayes classifier. They first found out the important attributes that indicate individuals who perform well. After which, using these attributes, researchers made predictions of the future performance of the sales agents. Ranjan et al. (2008) discussed the potential of data mining algorithms in predicting and evaluating workers' performance. This will help HRM systems improve the quality of decisions by enabling the discovery and extraction of useful

features and patterns from large datasets. Extracting useful knowledge from large datasets has become the need of an hour and so in any company's hiring process. The right candidate is significant, but to me, such a massive amount of data is a complicated task. This is the situation where data mining plays an important role. This has also been mentioned by Ancheta et al. (2012) in their research, where they used rule-based classification for extraction of useful knowledge to predict the areas in which newly hired faculty members require training and organize the necessary development programs. Researchers used the Cross-Industry Standard Process for Data Mining (CRISP-DM) for predictive analysis to determine the required professional training for the faculty members to increase their efficiency. In another paper, Sarda et al. (2014) used classification algorithms such as Decision Trees and Naïve Bayes for to predict the rank of the job applicants for a particular profile. This was done based on resumes and the applicants' social media presence. With the help of this rank prediction, a list is generated of the ranked candidates, which companies further use during the hiring process. Various data mining and machine learning models reduce the time spent analyzing the data an organization got from the collection of resumes of an employee. Al-Radaideh and Al Nagi (2012) worked with data mining techniques such as Decision Trees (ID3 and C4.5) to predict employees' performance. They built classification models and validated the generated model by conducting experiments on real data collected from various organizations to detect the most effective factors that impact employees' performance. Also, Sukanya et al. (2012) proposed using various classification models and clustering to improve performance in the education sector. They considered social, psychological, and other environmental variables for predicting student performance. The approach of data mining has extracted useful information from existing student databases to manage upcoming student databases. This has helped teachers to enhance the performance of students. Salleh et al. (2011) checked the effect of motivation on the performance of state government employees in Malaysia. Through this study, they found out that there is a positive relationship between performance and motivation as employees with motivation and strong interpersonal relationships with their peers tend to perform better at work. In one of the research papers, Desouki and Al-Daher (2015) discussed the use of data mining techniques such as Decision Trees, *k*-nearest neighbor, Support Vector Machines to the domain of HRM that can help the HR team analyze the performance appraisal results. They concluded that the use of classification and clustering algorithms could help companies to enhance the efficiency of the performance evaluation systems. Kahya (2007) worked on certain important factors that impact the performance of employees. The researchers have also gone through the previous studies that have described the effect of experience, salary, working conditions, and job satisfaction on the performance of employees. An employee's grade in an organization has a huge positive impact on the employee's performance. Also, the work environment has both negative and positive effects on Performance. They found that the employees with good qualifications had shown dissatisfaction due to bad working conditions. On the other hand, employees with average qualifications had shown high Performance due to bad conditions and experience has shown a positive relationship with the performance of the employees. Data mining in HR has also been researched by Chang and

Ming (2008); in this paper, they discussed the applications of data mining techniques that can be used to detect associations among personal profiles and work behavior that can help companies analyze employees' data. Also, it will help organizations to improve their HR System by improving the decisions in processes such as staffing, budgeting, and training. Apart from these researches, various medical researchers have also deployed the techniques of data mining to clinically extract the useful patterns from patient's data. Hence, data mining can help HRM in organizations in the performance evaluation of employees. All the past work done in this domain has shown the usage of data mining tools and provided valuable insights while predicting the Performance of employees. However, certain elements are overlooked and can be improved to give more relevant results. Most of these papers have considered factors dependent on employees' abilities. However, several external factors are independent of employees' abilities but have a huge impact on employees' performance. These factors include the environment of the workplace, peer relationships, convenient working hours, family background, health status, circumstances of employees, etc. These factors should be considered during performance analysis because if the workplace environment is not healthy and proper, then an employee cannot perform to its full potential; similarly, if the family environment or circumstances is not good for a particular employee, then also it will affect his or her productivity. So, one should also consider both social and psychological factors while doing performance analysis. Hence, more advanced data mining and machine learning tools must be applied to gather quality data for making predictions. Also, while maintaining data quality, its quantity should not be compromised as data size plays a huge role in making correct predictions.

39.3 Methodology

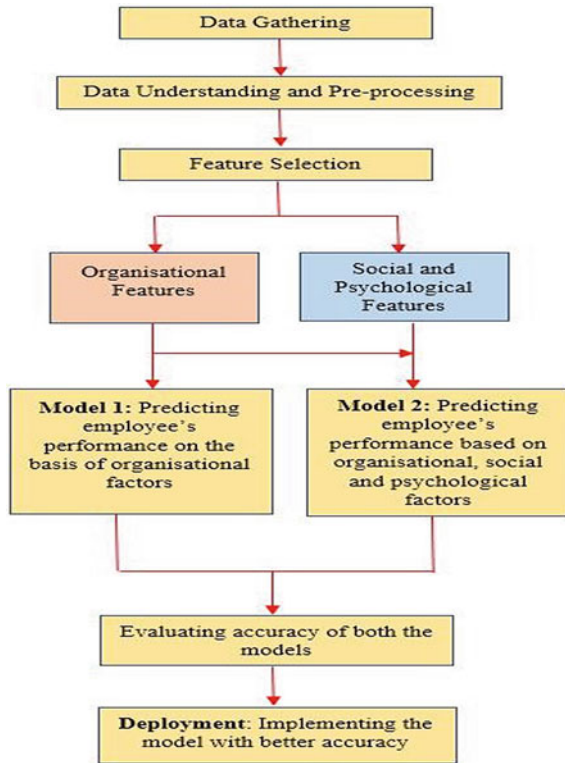
This research follows the step-by-step process of forecasting employees' performance based on various features. To achieve good results, this research uses machine learning and data mining techniques that are being used widely in several industries. This methodology involves the following steps:

- Data understanding
- Data preparation
- Model building
- Evaluation
- Implementation

Figure 39.1 depicts the steps that are performed during the entire research.

The following sections in this research will discuss these steps in detail, along with the importance of choosing the right factors for making predictions and what models, such as Random Forests, Naive Bayes, k -nearest neighbor, we have used while predicting the employee's performance.

Fig. 39.1 Flow of methodology



39.3.1 Dataset Preparation and Description

One of the critical topics in DM and machine learning is feature selection; it is a method of selecting essential variables from a dataset to increase the accuracy of machine learning outcomes. When variables alone are not sufficient, the predictive performance suffers and hence requires additional features to be included in a dataset. As a result, extraneous and useless variables must be avoided, and all important features should be considered for the model to function correctly. The selection of unwanted variables that need to be avoided can be made manually or automatically depending on domain knowledge. Human Resource performance evaluation is a delicate task. A practical tool to deal with varied facts can support managers in making decisions and plans that can be very helpful in avoiding prejudice. Historical data, such as performance-influencing qualities, could be used as learning opportunities in data mining. When the study concept arose, it was intended to be a long-term project to use a classification model to forecast Performance based on a dataset collected. However, due to the difficulty in obtaining accurate data from the HR department

and confidentiality and security concerns, I have prepared a dummy dataset with essential attributes. For creating this dataset, I have taken help from the previously available dataset at Kaggle and added other social and psychological factors that can affect an employee's performance.

In this experiment, we have used a dataset of employees that contains attributes such as Gender, Education Background, Employee job role, Salary, Department, and Employee Job Hours (refer to Tables 39.1 and 39.2). Along with these attributes, I have also considered the attributes such as health status, Employee Relationship Satisfaction, sleep hours of employees, Time spent on meditation, and marital status. All these attributes are considered to see whether these factors contribute to the performance of employees or not.

39.3.2 *Analysis of Data*

In data mining, analysis of data is essential as it helps develop an in-depth understanding of data. Data understanding is one of the essential parts of any classification model to make logical and accurate predictions. In this research, we have plotted graphs to observe the association between several factors and see how these factors can impact an employee's performance.

Here, Fig. 39.2 represents the effect of employee work-life balance on performance. This graph depicts that if an employee can manage a good work-life balance, then his or her performance will be impacted positively.

The workplace environment is an essential factor that determines the productivity of work for an employee. This we can witness by looking at Fig. 39.3; here, as the value of environment satisfaction increases on the scale, the performance rating also increases. Hence, this factor impacts the overall performance of an employee in a positive way.

To see the effect of Gender and to know whether there is any difference in the performance of male and female employees, we have plotted the graph between Gender and Performance. Figure 39.4 depicts that Gender has not much effect on an employee's performance as here we can see both male and female employees have approximately similar average performance ratings.

Average performance Rating for Males: 3.00

Average performance Rating for Females: 3.02.

Figure 39.5 depicts the positive relationship between an employee who does meditation and his or her relationship satisfaction. This suggests that an employee who spends weekly time doing meditation can manage his or her relationship with peers in the office or family members at home.

Table 39.1 Organizational factors

	Attribute	Type	Description
1	Employee Id	Nominal	Specifies the unique identifier of an employee
2	Age	Numeric	Represents the current age of an employee
3	Gender	Nominal	Represents the Gender of the employee
4	Education background	Nominal	Specifies the educational background of an employee
5	Emp department	Nominal	Specifies the department in which an employee works
6	Emp job role	Nominal	Specifies the job role of an employee
7	Business travel frequency	Nominal	Represents how frequently an employee has to travel for work
8	Employee education level	Ordinal	Specifies the level of education of a particular employee
9	Emp job involvement	Ordinal	Specifies to what extent an employee is involved in his or her job
10	Employee job level	Ordinal	Specifies the level of a job of an employee
11	Num companies worked	Numeric	Specifies the number of companies an employee has worked till yet
12	Overtime	Nominal	Specifies whether an employee has worked overtime or not
13	Employee last salary hike percent	Numeric	Specifies how many hikes in percent an employee has received in the latest period
14	Total work experience (in years)	Numeric	Specifies the total work experience in years of an employee
15	Years since last promotion	Numeric	Specifies how many years have gone since the last promotion of an employee
16	Training times last year	Numeric	Specifies how many times an employee has undergone training sessions in the last year

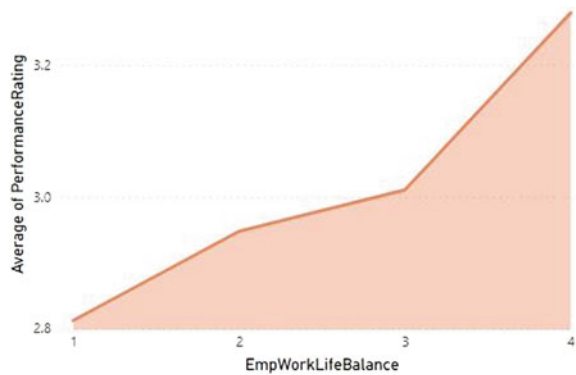
39.3.3 Construction of Classification Model

The proposed methodology is used to build a classification model that finds out the effect of organizational, social, and psychological factors on an employee’s job performance. Classification is a process of predicting the class labels or the target variable based on input data. The general steps followed in a classification process are shown in Fig. 39.6

Table 39.2 Social and psychological factors

	Attribute	Type	Description
1	Marital status	Nominal	Specifies whether an employee is married or not
2	Employee environment satisfaction	Ordinal	Specifies whether an employee is satisfied with the environment in which he/she is working
3	Employee job satisfaction	Nominal	Specifies whether an employee has satisfaction with what his or her doing
4	Distance from home	Numeric	Represents the distance of the office from the home of an employee
5	Social network	Ordinal	Represents how good an employee’s social network is
6	Lampwork life balance	Ordinal	Specifies how good is the balance of work and personal life of an employee
7	Sleep hours	Numeric	Specifies the daily sleep hours of an employee in a single day
8	Supporting others	Ordinal	Specifies how much an employee supports their peers and colleagues
9	Employee relationship satisfaction	Ordinal	Specifies an employee’s relationship satisfaction at his or her home and also at the workplace with their peers and superiors
10	Weekly meditation	Ordinal	Specifies how much time <i>n</i> employee spends on doing meditation per week
11	Health status/BMI range	Ordinal	Specifies the BMI range of an employee to know whether an employee is healthy or not

Fig. 39.2 Effect of work-life balance on performance



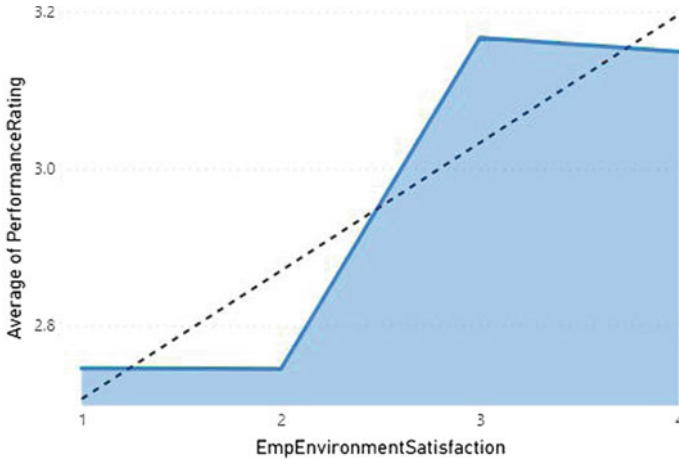


Fig. 39.3 Effect of environment satisfaction on performance

Fig. 39.4 Effect of gender on performance of an employee

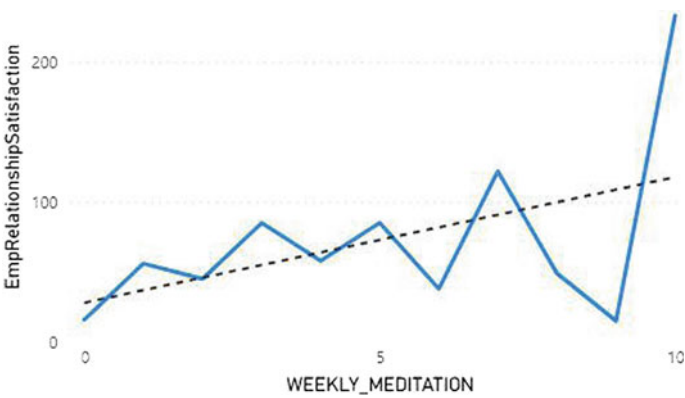
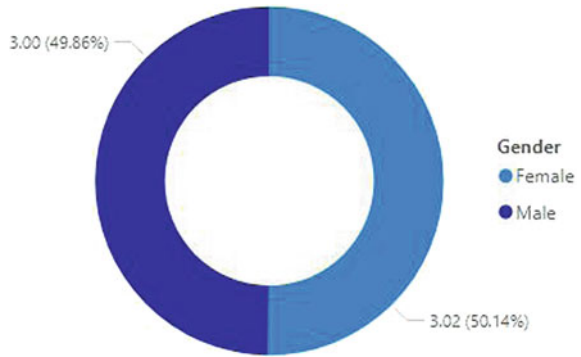
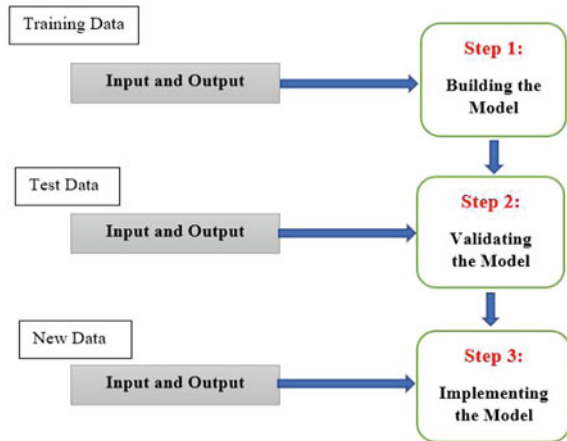


Fig. 39.5 Effect of weekly meditation on relationship satisfaction

Fig. 39.6 Steps in classification process



39.3.4 Model Building

The research follows an approach in which we have predicted the employee's performance in two stages. In one, we make predictions based on organizational factors, and in second, predictions are made based on organizational, social, and psychological factors.

Experiment 1 Building model based on organizational factors

In this phase, we have pre-processed the organizational factors data and built a correlation matrix on knowing the association of different variables with performance rating (Fig. 39.7).

Based on the correlation value, we have excluded collinear attributes as they might have a negative impact on the accuracy of results. Once data is prepared, five different machine learning models are built on training data to predict the performance rating of employees. These models are

- Logistic Regression
- Decision Tree
- Naïve Bayes
- Random Forest
- Gradient Boosting Classifier

After model building, these models are evaluated for accuracy on test data to find the most appropriate model for making predictions.

Experiment 2 Building model based on organizational, social, and psychological factors

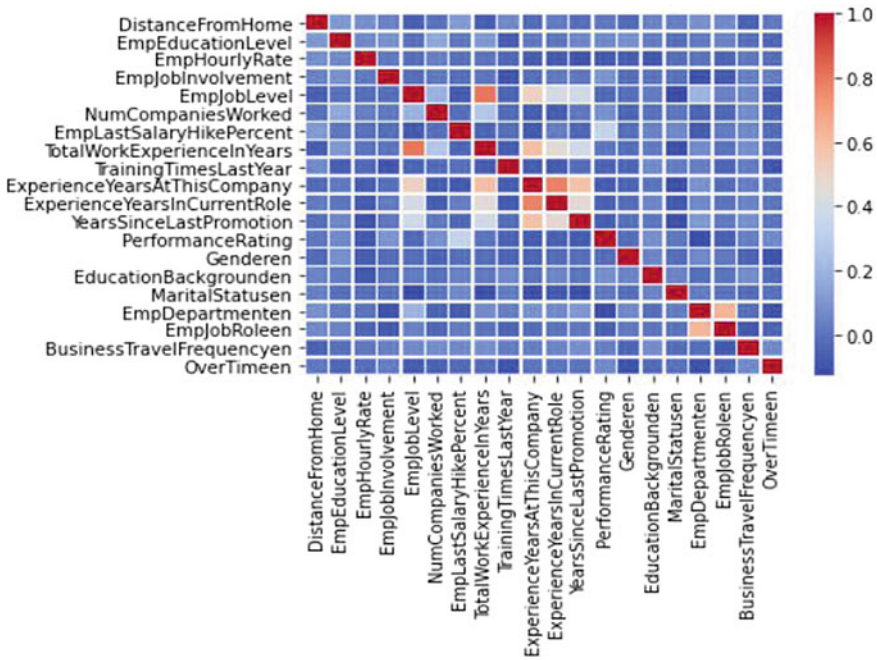


Fig. 39.7 Correlation between organizational features and performance

In this phase, we have combined social and psychological attributes and organizational attributes and built a correlation matrix on knowing the association of different variables with performance rating (Fig. 39.8).

Here also, collinear attributes are excluded. Once data is prepared, the same five different machine learning models are built on training data to predict the performance rating of employees; these are

- Logistic Regression
- Decision Tree
- Naïve Bayes
- Random Forest
- Gradient Boosting Classifier.

Once the model is built, these models are evaluated for accuracy on test data.

After completing the above process, the results of both these experiments are compared to know the effect of adding social and psychological factors on the accuracy of predictions. The results of the comparison will be explained in the next section.

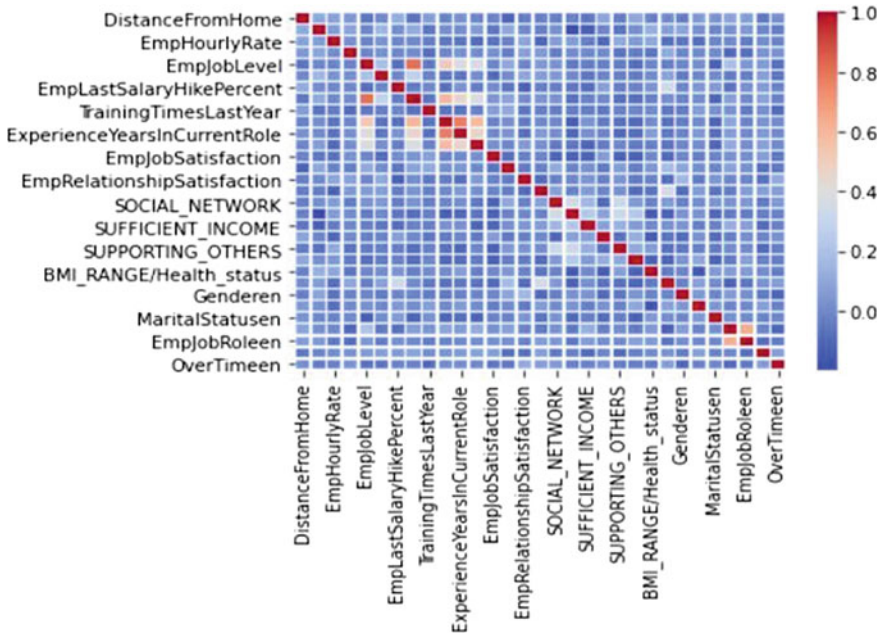


Fig. 39.8 Correlation between organizational, social, and psychological features and performance

39.4 Results and Discussion

Both these experiments have been performed using the same set of machine learning models to compare the results and find out whether the addition of social and psychological factors apart from organizational factors is beneficial or not for the performance evaluation of employees.

Results: Experiment 1

In Experiment 1, we calculated both the accuracy score and *F1* score for all the models that are being built.

From Table 39.3, we can conclude that the Decision Tree gives us the most accurate predictions of performance rating based on organizational features (78.33%). Other models have almost accurate scores and varying *F1* scores.

Results: Experiment 2

From Table 39.4, we can observe that accuracy has improved for the models built on data having social and psychological factors and organizational factors. Among these models, Decision Tree and Gradient Boosting Classifier give us the maximum accuracy (accuracy Score: 88.33%), higher than the accuracy obtained from Experiment 1 (best accuracy score: 78.33%).

Table 39.3 Types of Models

S. No.	Models	Accuracy score (%)	F1 score (%)
1	Logistic regression	76.66	54.65
2	Decision tree	78.33	61.68
3	Naïve Bayes	76.66	57.77
4	Random forest	76.66	41.45
5	Gradient booster classifier	76.66	50.11

Table 39.4 Accuracy of models

S. No.	Models	Accuracy score (%)	F1 score (%)
1	Logistic regression	73.33	59.36
2	Decision tree	88.33	81.11
3	Naïve Bayes	85.00	68.88
4	Random forest	83.33	67.62
5	Gradient booster classifier	88.33	82.07

39.5 Conclusion and Future Scope

This study has concentrated on how machine learning can help predict employee performance and what factors an organization should consider while evaluating the performance of employees. This will help HRM in making intelligent and intelligent decisions. Machine learning algorithms can help with classification and feature extraction for large dimensionality and multiclass data patterns. This study predicted employee performance through two experiments; in the first experiment, performance ratings were made based on organizational factors. Predictions were made based on organizational, social, and psychological factors in the second. Results have shown that the accuracy of models has increased in Experiment 2 compared to Experiment 1. Hence, through this study, we have concluded that an organization should consider organizational factors. At the same time, performance evaluation also looks into other social and psychological factors that can significantly impact the productivity and performance of an employee. In the future, the efficiency and effectiveness of this research can be improved by using more advanced tools and algorithms. Also, we can improve results by collecting more data on employees from different companies and by considering other attributes.

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Part IX
Human Resource Management

Chapter 40

Validation of the Collective Organizational Engagement Scale



Pavithra Ganesh and Kailash B. L. Srivastava

40.1 Introduction

The hierarchical nature of organizational data has gained increasing interest in human resources (HR) among academicians and practitioners alike. It has been emphasized that multilevel analysis should be used to study organizational-level constructs to get unbiased results (du Toit and du Toit 2008; Dyer et al. 2005). One such composite variable is collective organizational engagement (COE) (Barrick et al. 2015), which has recently been conceptualized as a multilevel concept (Ganesh and Srivastava 2022).

The impact of employee engagement on an array of individual and organizational consequences has been studied extensively, including employee well-being, job satisfaction, reduced turnover, productivity, and increased financial performance (see Motyka 2018; Saks 2019). Despite being a varied research topic, there are still inconsistencies in its definition and conceptualization (Macey and Schneider 2008). Studies have focused on engagement at the individual level, but one area that needs more exploration is how engagement varies at the broader organizational level. Lately, researchers have examined engagement as a shared rather than an individual process and recognized it as a collective construct. Several competing conceptualizations have been put forth, including organizational engagement climate (Albrecht 2014), collective organizational engagement (Barrick et al. 2015), workforce engagement (Schneider et al. 2018), and collective engagement (Kleinaltenkamp et al. 2019). While all these terms theorize collective-level engagement as a shared disposition or perception of actors, there is yet to be a standard scale for its measurement.

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Barrick et al. (2015) developed a model to measure engagement at the organizational level. They defined COE as “shared perceptions of organizational members that members of the organization are, as a whole, physically, cognitively, and emotionally invested in their work” (p. 113). This definition reflected their view that COE is not simply a linear aggregation of individual employee engagement measures. Thus, in their scale, while the unit of measurement was the individual, the items measured an overall, shared viewpoint at the organizational level using referent-shift items (Chan 1998). The scale used six items from the job engagement (JE) scale by Rich et al. (2010), which adhered to the theoretical definition of engagement given by Kahn (1990). COE was calculated as the average of individual scores of employees in a specific organization. The scale had good internal consistency and discriminant validity in single-level factor analysis. Therefore, this seminal study extended the engagement theory and empirically examined the motivational antecedents, analysis level, and COE measurement.

Since then, various studies have used the COE scale developed by Barrick et al. (2015) in models exploring the relationship between organizational-level variables, and COE is viewed as a source of organizational productivity and competitive advantage (e.g., Eldor 2020; Malik et al. 2020; Ozdemir and Temel 2017). However, this method of measuring COE is limited because it does not take into consideration the nested nature of organizational data.

Most of the studies use the mean of individual scores to measure COE, which fails to account for the variation among individual employees within the organization.

This drawback was rectified in a study by Ganesh and Srivastava (2022), who used multilevel confirmatory factor analysis (MCFA) to measure the multilevel structure of COE. They conducted MCFA analysis using nine reference-shift items, thus extending the six items used by Barrick et al. (2015). The study found that a three-factor model of COE at the organizational and individual levels had high loadings and fit well with the data. Nevertheless, this study did not examine the factorial invariance of the multilevel scale, which has been recommended as an essential step in MCFA (Tagliabue et al. 2020). Further, to ensure the discriminant validity of the measure, it has to be distinguished from the original job engagement scale. MCFA is a method of conducting factor analysis in which the measured scores are disaggregated into within (individual) and between (organizational) level latent constructs. It is done by simultaneously considering the covariance matrix of both the levels (Muthén 1994). Conducting MCFA on complex data measuring COE is, thus, essential to confirm the scale’s psychometric properties. It reduces the chances of biased results and answers the level-of-analysis question of the COE construct.

The present study is likely to contribute to the extant literature by examining the cross-level invariance, composite reliability, and discriminant validity of the COE scale. In so doing, we extend the work of Ganesh and Srivastava (2022) by further validating the COE scale in the Indian context. All the calculations in the study were conducted using Mplus software V.8.7 by Muthén and Muthén (1998–2017).

40.1.1 Cross-Level Invariance

Measurement invariance is an essential concept in scale measurement. Invariance implies that the scale items are interpreted the same way across groups. In MCFA, there are two levels of invariance. The first is cross-level invariance (also called factorial invariance or configural invariance), and the second is cluster-level invariance (also called scalar invariance) (Jak et al. 2013). These measurement invariances are tested by constraining factor loadings across levels and constraining the Level 2 residual variances to be zero. The constrained model is then compared to the unconstrained model using chi-square difference tests. Insignificant results indicate that the two models do not differ significantly in their values, and there is no measurement bias across levels or clusters (Jak et al. 2013).

This concept is also explicated in a paper by Tagliabue et al. (2020). They use the terms configural isomorphism and psychometric isomorphism to study the factor structure and factor loadings at the lower and higher levels. Configural isomorphism means that the factor structure, that is, the number of dimensions of a particular scale, are similar in both levels. When this is not true, it implies that the construct has different meanings at the individual and organizational levels. Psychometric isomorphism, according to Tagliabue et al. (2020) is “the condition in which both the factorial structure (configural isomorphism) and the factor loadings (metric isomorphism) are the same across levels. Metric isomorphism exists if factor loadings are equivalent across levels” (p. 386). Thus, both isomorphism and invariance must be tested in a scale to fully understand its multilevel nature.

40.1.2 Composite Reliability

Composite reliability, also known as construct reliability, is a measure of scale internal consistency. Popular measures of composite reliability include alpha coefficient (Cronbach 1951) and omega coefficient (McDonald 1970). Reliability is calculated by dividing the true-score variance by the observed variance to determine the extent to which the factor loadings of a set of items relate to their underlying factor. The reporting of reliability indices has been extended to multilevel constructs, and Geldhof et al. (2014) have given a formula for level-specific composite reliability.

However, a recent study by Lai (2021) shows that formulae given by Geldhof et al. (2014) can overestimate the between-level reliability. This is because the between-level factor loadings are themselves based on latent scores rather than observed scores. He further goes on to give modified formulae to calculate the true level-specific composite reliability scores, which have been used in the study by Ganesh and Srivastava (2022). The present study, too, follows the same trend by calculating the true composite reliability omega-within (ω^w) and omega-between (ω^b) based on the formula in Lai (2021), Eqs. 15, and 17, respectively.

40.1.3 Discriminant Validity

Finally, it is essential to ensure that COE, as a referent-shift composite scale, captures a different construct than the JE scale. Ganesh and Srivastava (2022) explored the multilevel nature of COE but did not distinguish COE from JE. In the original COE study by Barrick et al. (2015), discriminant validity between JE and COE was established, but only at the aggregate level. Thus, a distinction between the multilevel referent-shift items of COE and the original JE scale has not yet been established. This is a significant gap to fill, considering the nomological distinction between COE and JE.

40.2 Method

Two hundred ninety-seven (297) employees from 34 Indian manufacturing organizations (average cluster size = 8.73) contributed to this study. We sent a letter of introduction to the HR department of 50 organizations, out of which 38 organizations agreed to be a part of the study. These organizations were randomly chosen from a list of manufacturing industries in and around the city of Bangalore, India. Fifty organizations were chosen because this was a pilot study preceding a large-scale study on COE. The HR managers asked fifteen randomly selected permanent employees from several departments in their organization to fill out the online questionnaire, and the responses were directly recorded with the researchers. Responses from four organizations were dropped since only one or two employees responded. All the participants answered the questions voluntarily and with informed consent, since they were ensured of the confidentiality of the responses.

More than half the respondents were male (59.93%), and the average age and tenure of the respondents were 33.25 years ($SD = 6.73$) and 8.40 years ($SD = 4.17$), respectively. At the organizational level, the average size of the organizations was 616.23 ($SD = 389.1$), and the average age was 13.82 years ($SD = 6.33$).

40.2.1 Measures

Collective Organizational Engagement. The six-item COE scale by Barrick et al. (2015) was adopted for this study. Ganesh and Srivastava (2022) added three more referent-shift items from the original questionnaire by Rich et al. (2010) to extend the scale, which has been used in this study. The scale, thus, has nine items, with three items each measuring the dimensions of collective physical (e.g., “My colleagues and I try our hardest to perform well on our job”), cognitive (“People in my organization

are immersed in their work”), and emotional (“Almost everyone in my workplace is interested in the job they do”) engagement, respectively. Each item is rated on a five-point Likert scale, from 1 (strongly disagree) to 5 (strongly agree).

Job Engagement. Nine items from the 18-item job engagement scale by Rich et al. (2010) were used to assess individual job engagement. The items that were included were different from the ones used for the COE scale. Items measuring the level of physical (e.g., “I strive as hard as I can to complete my job”), cognitive (“At work, I concentrate on my job”), and emotional (“I feel positive about my job”) engagement were rated from 1 (strongly disagree) to 5 (strongly agree).

Questions about demographic details and some distractor items were placed between the COE and JE scale to reduce respondent bias.

40.2.2 Data Analysis Strategy

Due to the non-independence of nested data, the current study used MCFA to evaluate the shared engagement of employees of a particular organization at the lower (within) and higher (between) levels. Maximum likelihood with robustness to nonnormality (MLR) (Muthén and Muthén 1998–2017) was used to test the theoretical model of COE, with three factors at the within and between levels (Fig. 40.1). Similar to single-level CFA, Mplus provides several measures to assess model fit, such as χ^2 , Comparative Fit Index and Tucker–Lewis Index (CFI and TLI, values greater than .90 indicate good fit) (Hu and Bentler 1999), and Root Mean Squared Error of Approximation (RMSEA, scores less than .05 indicate excellent fit) (Byrne 2001). Additionally, Mplus gives separate Standardized Root Mean Square Residual scores (SRMR, values less than .06 show a good fit) (Byrne 2001) for Level 1 and Level 2 models.

In order to validate the COE scale, several competing models were first tested to assess the factor structure that best fits the data. In addition, factor loadings and correlations between the factors were also considered, especially at the between-level. Next, factorial isomorphism and cross-level invariance were checked by comparing constrained and unconstrained models. Chi-square difference test was used to compare nested models, and Bayesian Information Criterion (BIC) (Schwarz 1978) and the Akaike Information Criterion (AIC) (Akaike 1987) values were used to weigh models with differing number of parameters. In the third step, the level-specific composite reliabilities of the scale were tested. Finally, MCFA was conducted using both COE and JE scores to check for discriminant validity.

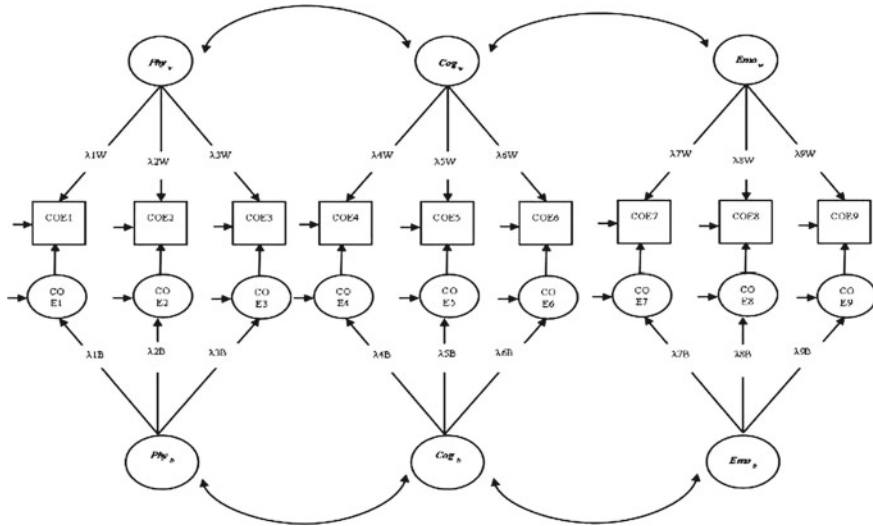


Fig. 40.1 Theoretical multi-dimensional model of collective organizational engagement. Adapted from Ganesh and Srivastava (2022)

40.3 Results

As a preliminary analysis, Table 40.1 shows the intraclass correlation (ICC), skewness, and kurtosis values for the COE items. The ICC values ranged between 0.166 and 0.259, indicating considerable between-level variance to apply MCFA (Geldhof et al. 2014). The skewness and kurtosis scores showed deviation from normality; therefore, MLR was the appropriate method of analysis.

Table 40.1 Description of scale items

Items	Mean ^a	Variance	Skewness	Kurtosis	ICC ^b
COE1	3.343	1.727	- 0.339	- 1.046	0.259
COE2	3.158	1.709	- 0.267	- 1.051	0.237
COE3	2.973	1.447	0.017	- 0.863	0.187
COE4	3.663	1.301	- 0.609	- 0.429	0.219
COE5	3.418	1.415	- 0.392	- 0.715	0.243
COE6	3.582	1.469	- 0.443	- 0.821	0.215
COE7	3.340	1.504	- 0.285	- 0.845	0.170
COE8	3.650	1.446	- 0.581	- 0.661	0.166
COE9	3.374	1.581	- 0.445	- 0.800	0.227

^a N = 297, ^b Number of clusters = 34 ICC = Intraclass Coefficient

Next, several models were tested and compared for fitness. We began with Model 1 (Complex), which was a single-level CFA using the “TYPE = Complex” command with three factors. This was a basic model for understanding the factor structure of the items, but it took into account the non-independence of responses. In all the other models, we used the “TYPE = Twolevel” command to segregate the variance/covariance matrix into within and between levels. Model 2 (3W3B-F) was the theoretical two-level model, with three factors, each, in within and between levels, and the item loadings were free to vary across factors. Model 3 (1W1B) had a mono-factorial design at the within and between levels. Model 4 (3W1B) and Model 5 (1W3B) had different factor structures at the within and between levels, with one level having three factors and the other having a single factor.

From Table 40.2, showing the fit indices of several models that were tested, we find that Model 1 had an acceptable fit, and the three-factor model was supported. The item loading for this model ranged between 0.73 and 0.89 for physical engagement, 0.82 and 0.88 for cognitive engagement, and 0.75 and 0.87 for emotional engagement. While the single-level model could be accepted, Model 2 had a considerably better fit than the first model, indicating that COE can be best understood as having two levels. In terms of factor scores for Model 2, the loadings for the three dimensions ranged from 0.66 to 0.86, 0.76 to 0.86, and 0.70 to 0.83 at the within-level, and from 0.98 to 0.99 for all three dimensions at the between-level. The mean factor correlations were 0.88 and 0.96 at the within and between levels, respectively.

The rest of the models, with competing two-level factor structures, had marginally worse fit indices than Model 2. Comparing the AIC and BIC, lower values of Model 2 showed that it was superior to Models 3, 4, and 5. Nevertheless, Model 4 is also plausible, considering the high correlation of the between-level dimensions. In the present study, for all further analysis, we considered Model 2, which has three dimensions at the individual and organizational level, showing that configurational isomorphism holds true for the two levels. We also tested a Model 6, which had a second-order general factor measuring COE at the within and between levels. This model displayed excellent fit and good factor loadings. Notably, the three within-level dimensions had high loadings onto the second-order within-COE (0.95, 0.94, and 0.92). Similarly, between-level physical, emotional, and cognitive dimensions were highly loaded onto the overall between-COE factor (0.99, 0.94, and 1).

Next, we tested the psychometric invariance by constraining the factor scores at the individual and organizational levels to be the same. Model 7 (3W3B-C) was similar in factor structure to Model 2, but the loadings were constrained to be equal at the within and between levels. Model 7 also had substantial item loadings for the physical (0.67–0.85), cognitive (0.77–0.85), and emotional (0.70–0.84) engagement dimensions at the within-level, and the loadings ranged from 0.98 to 0.99 for all factors at the between-level. All the loadings were significant, with $p < 0.01$. In order to compare the nested unconstrained and constrained Models 2 and 7, we used the Satorra-Bentler scaled chi-square difference test (Satorra and Bentler 2001; 2010), which was found to be non-significant ($\Delta\chi^2(df) = 2.04(6)$, $p = 0.91$). Thus, there was no significant difference in the fit of both models, though Model 7 is more parsimonious. This highlights the cross-level invariance of the COE scale.

Table 40.2 Fit indices of competing models

	χ^2 (df)	CFI	TLI	RMSEA	SRMR		AIC	BIC
					W	B		
Model 1 (Complex)	62.67 (24)	0.978	0.967	0.074	0.024		6768.1	6878.9
Model 2 (3W3B-F)	80.12 (49) *	0.980	0.971	0.046	0.03	0.03	6749.7	6934.4
Model 3 (1W1B)	143.6 (54)	0.940	0.925	0.075	0.04	0.04	6816.1	6982.3
Model 4 (3W1B)	88.06 (51)	0.977	0.967	0.049	0.03	0.05	6755.5	6932.8
Model 5 (1W3B)	117.9 (52)	0.959	0.943	0.065	0.04	0.03	6795.2	6968.8
Model 6 (2nd Order)	77.47 (50)	0.983	0.975	0.043	0.03	0.03	6748.1	6929.1
Model 7 (3W3B-C)	80.11 (55) *	0.984	0.979	0.039	0.03	0.04	6740.2	6902.7
Model 8 (3W3B-R)	80.43 (57) *	0.985	0.981	0.037	0.03	0.05	6736.7	6891.8

df = degree of freedom, CFI = Comparative Fit Index, TLI = Tucker–Lewis Index, RMSEA = Root Mean Squared Error of Approximation, SRMR = Standardized Root Mean Square Residual, W = Within, B = Between, AIC = Akaike Information Criterion, BIC = Bayesian Information Criterion. * $p > 0.01$

In the next step, cluster-level invariance was checked by constraining the residual errors for the three dimensions of COE at the between levels to be zero (Model 8). This baseline, constrained model was then compared to Model 2. The model showed good factor loadings at both levels for all dimensions. The chi-square difference test between Model 8 and Model 2 was also found to be insignificant ($\Delta \chi^2(df) = 2.57(8)$, $p = 0.96$). Thus, cluster-level invariance is also confirmed.

We then calculated the composite reliability of the COE scale using the factor loadings and correlations in Model 2. The COE scale showed good composite reliability for the physical (0.827), cognitive (0.853), and emotional (0.803) collective engagement at the within-level. For the between-level, too, the scale displayed excellent internal consistency for the three dimensions (0.834, 0.815, and 0.814, respectively).

To establish discriminant validity, we first tested the single-level JE scores, having three dimensions, using “TYPE = Complex”, which showed good fit to the data ($\chi^2(df) = 39.15(24)$, $p = 0.03$). Thus, the JE scale measured the three dimensions of engagement at the individual level. Next, we checked the ICC scores for the JE scale, which ranged from 0.06 to 0.14, indicating the similarity of responses at the organizational level. Hence, we conducted two-level MCFA with COE and JE scales. One of the constraints of MCFA is the requirement for a large sample, especially at the between levels. Since we had only 34 clusters and the factor structure of the COE scale had already been identified, we used dimension-specific item parceling to

reduce the number of parameters (Kishton and Widaman 1994). The first two-level model had three item parcels of COE and a second-order JE factor having three dimensions, at within and between levels. This model could not be identified due to a very high correlation between the JE factors at the between levels. Therefore, we tested another two-level model in which JE had nine items loading on it at both levels, and COE was measured using the item parcels. This model displayed poor fit at the between-level (SRMR value for between = 0.126), while the correlation between COE and JE at the within-level was 0.23 ($p < 0.01$), and at the between-level was 0.59 ($p = 0.05$). We also tested a third model, in which a second-order JE factor with three dimensions was only considered at the within-level, while COE was at the within and between levels. This model showed excellent fit ($\chi^2(df) = 62.25(51)$, $p = 0.13$), and the correlation between the two variables at the within-level was 0.3 ($p < 0.01$). Thus, considering the differing factor structures and weak correlation of the two constructs, the results presented COE and JE as discrete factors.

40.4 Discussion

The current study aimed to understand the psychometric properties of the scale measuring COE while considering the nested nature of organizational data by using MCFA. It also proves the scalar and cluster-level invariance of the dimensions of COE and provides empirical evidence for the distinction between COE and JE. We conducted MCFA using data from employees in 34 manufacturing organizations, such that employees were at Level 1, and the organization was at Level 2 of the analysis. The results indicated that COE is a multilevel and multi-dimensional construct having three factors at the within and between levels. However, it is worth noting that the item loadings at the organizational level were much stronger than at the individual level. This result supplements other studies which use MCFA to examine higher-level variables (e.g., Dunn et al. 2015; Margola et al. 2017; Martin et al. 2010), indicating that while COE items are significant at both levels, the referent-shift items primarily capture Level 2 variables, as intended.

For factor structure at both levels, we found no difference in the item loadings across the dimensions at the two levels, even when loadings were constrained to be equal. The three dimensions of collective physical, cognitive, and emotional engagement were, thus, supported by the results. It was also found that the meaning of the three dimensions does not vary among organizations. Thus, it provides significant evidence for the construct validity of the COE scale.

The theoretical underpinning of (Barrick et al.'s 2015) scale was based on (Khan's 1990) conceptualization of a multi-dimensional engagement. The fulfillment of the conditions for meaningfulness, psychological safety, and psychological availability would lead to COE. However, their scale did not delve into the dimensionality of COE. Our study, therefore, is an important extension of the current scale and provides a deeper theoretical understanding of engagement at the collective level. The high

factor correlations within and between levels led us to examine competing two-level models with mono-factorial designs (see Table 40.2). The three-factor design remained the best fit for the data and also supported a second-order factor of COE at the two levels.

We addressed the concerns of discriminant validity as results clearly showed that the referent-shift items of the COE scale are distinct from the JE scale. The difference in the loadings of COE and JE items between levels imply that while COE broadly measures the organizational level engagement, JE is more focused on the individual-level variation in engagement levels. The finding is consistent with the conceptualization of Barrick et al. (2015) who stated that “collective organizational engagement is a firm-level construct and an indicator of the overall *motivational environment* within the firm and thus has a more *descriptive* focus. In contrast, individual-level engagement is based on the perception of one’s *engagement* and thus has a more *evaluative* focus” (p. 113). Additionally, the inter-factor correlations between C

OE and JE were not strong within the level and only moderately robust at the between-level.

Apart from the theoretical contribution to the engagement literature, this study has important practical implications for the field of organizational behavior. It is one of the first to provide a reliable and valid multi-dimensional tool to measure COE and provides support to the work of Ganesh and Srivastava (2022). Based on the psychometric properties examined, it is clear that when the unit of analysis is the organization, the scale measuring COE is a preferable tool to JE. The present study strengthens the notion of considering the nested-ness of organizational data, especially when considering higher-level variables. Even in the case of an individual-level construct, such as the JE scale, accounting for the non-independence of data can reduce the chances of inflated parameters.

This study has some limitations. One of the major limitations is the small sample size between levels. While we addressed the issue of several parameters by using item parcels, future studies on a larger between-level sample can provide more robust results (Hox and Maas 2001). Another drawback is that the data was collected only from manufacturing industries in India. Including organizations from various sectors or conducting comparative studies of different countries can further enrich the literature. Future research can also focus on examining specific antecedent or consequent variables of the three dimensions of COE.

40.5 Conclusion

MCFA is becoming popular in organizational studies due to its superior methodological advantages. The present study demonstrated the validity and reliability of the nine-item scale measuring engagement at the collective organizational level and presented a factor structure for the construct at the employee and organizational levels. Based on the extant literature, which indicates the potential of COE to

enhance organizational performance, we believe that the findings of this investigation will be relevant for researchers and practitioners who want to understand firm-level engagement and its consequences.

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Chapter 41

‘Demanding, Yet Invigorating’: Exploring Job Demands and Resources of Volunteering Jobs in Humanitarian and Spiritual Indian NGOs



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41.1 Introduction

As an integral part of any non-government organization (NGO), volunteers willingly provide service to the community without expecting any monetary reward for their help (Garner and Garner 2011; Huynh et al. 2012). Indeed, without their assistance, commitment, and engagement, many NGOs’ efforts would be severely decreased or discontinued (Harp et al. 2017). By contributing to the development of social capital and civic behaviours, volunteering benefits not only the larger community that the NGO is serving but also the volunteers who receive multiple opportunities of personal growth (Snyder and Omoto 2008). Given the importance of volunteers, their participation, and their engagement in ensuring continued success of the NGOs, it is essential for them to be able to attract, engage, and retain volunteers (Harp et al. 2017).

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One interesting example of highly engaged and energetic volunteers is the distinct sect of full-time volunteers who are associated with humanitarian and spiritual NGOs in India (H&S NGOs hereafter). With the dramatic increase in the number of NGOs over the past 20 years (Niti Aayog 2021), one can find volunteers associated with H&S NGOs committed to their duties and experiencing an energetic and affective connection with their work (Vecina et al. 2012) that primarily comprises educating people on life skills, teaching meditation and yoga, and serving the disadvantaged sections of the society. Rather than seeing their work as stressful and demanding, these volunteers view it as challenging, interesting, and enjoyable and get so engaged that they are constantly in a positive state of mind wherein they are fully invested and committed to their roles (Vecina et al. 2012). Since engaged volunteers show higher tendency to remain associated with volunteering work (Huynh et al. 2014), it is imperative to explore what aspects of volunteering jobs specific to H&S NGOs lead to their engagement.

Job Demands and Resources (JD-R) theory (Bakker and Demerouti 2017) is the most extensively used theory when it comes to study engagement. The theory suggests that job demands and resources instigate two very different processes, namely a health-impairment process through burnout and exhaustion caused by job demands, and a motivational process through engagement caused by job resources. Several studies show that individuals with many job resources are able to cope better with their job demands and show high levels of engagement (Bakker et al. 2010; Xanthopoulou et al. 2007). In addition to this, every job or organization may have specific job demands and resources depending on the specific job characteristics that prevail (Bakker and Demerouti 2007).

Since volunteering is not identical to paid work, we cannot learn about volunteer work from existing knowledge of paid employees because individuals become volunteers for higher needs to make personal contribution without being involved in the business concerns (Cnaan Cascio 1998). Fundamental differences between volunteers and regular paid employees with respect to motivation, expected rewards, and workplace practices make it important to visit volunteering distinctly (Cnaan and Cascio 1998). Also, while most volunteers work only a few hours a week and are generally associated with more than one organization, we find a distinct sect of volunteers in India who are associated full time with large established H&S NGOs and work according to their norms and values.

In this study, we precisely answer two questions:

RQ1: What are the unique job demands and resources of volunteering jobs in H&S NGOs?

RQ2: How do full-time volunteers manage their demands and resources to exhibit high levels of engagement?

The paper contributes to the literature in important ways. First, it finds out specific aspects of volunteering jobs in humanitarian and spiritual NGOs—demands that require sustained physical and/or psychological efforts from the volunteers, and resources that are useful in achieving work goals, reducing job demands and the associated costs, and stimulating personal growth, learning, and development. Since

the JD-R theory holds a central assumption that specific job demands and resources that play a role in a certain occupation depends on the specific job characteristics that prevail (Bakker and Demerouti 2007), we extend this notion in the context of volunteering in humanitarian and spiritual NGOs in India to find out unique job demands and resources. Second, a growing body of research shows that humanitarian and spiritual NGOs depend a lot on volunteers in addition to donors, partners, and other members (Ariza-Montes et al. 2020). Since working in such NGOs is both physically and emotionally demanding, it becomes essential to focus on volunteering in such NGOs and explore the experiences of volunteers who are soulfully invested and committed to the organization.

41.2 Literature Review

41.2.1 *Job Demands-Resources Theory*

We draw on the theoretical frameworks of Job Demands and Resources (JD-R) Theory (Bakker and Demerouti 2017) to explore specific demands that volunteers face and the resources they experience that makes them highly engaged in their work. The theory states that every occupation has its own risk factors, classified as job demands and job resources. Job demands are physical, psychological, social, or organizational aspects of the job that require continued physical and/or psychological efforts, job resources are those physical, psychological, social, or organizational aspects of the job that are useful in achieving work goals; reduce job demands and its associated costs; and stimulate personal growth, learning, and development (Bakker et al. 2004). Job resources specific to an occupation have the potential to buffer the impact of job demands on strain (Bakker et al. 2005), which is particularly true for active jobs (Karasek 1979), which combine high job demands with high job resources while challenging employees to learn more and use new behaviours to motivate. Motivation, which helps individuals to be goal-oriented and focused, has a positive impact on job performance, whereas job strain, which leads to depletion of energy in individuals, has a negative impact on job performance.

JD-R theory holds a central assumption that specific job demands and resources play a role in a certain occupation depending on the specific job characteristics that prevail (Bakker and Demerouti 2007). For instance, certain job demands such as emotional demands may be highly prevalent in occupations of teachers or nurses but virtually absent in other occupations. Similarly, mental job demands may be significantly present in certain jobs such as the work of control room operators or air traffic controllers which is more about information processing than about working with others (Bakker and Demerouti 2007). Thus, it is important to first find out specific job demands and resources related to volunteering job in H&S NGOs before investigating various aspects of volunteering such as their engagement or retention.

JD-R model/theory has been extensively used to study different aspects of volunteering, such as burnout and connectedness in volunteers (Huynh et al. 2012; Lewig et al. 2007), exhaustion, stress and satisfaction of volunteers (Huynh et al. 2014, 2012; Huynh and Metzger 2008), and volunteer engagement (Alfes et al. 2016; Dal Corso et al. 2019). These studies have mostly adopted quantitative approach and have empirically tested several aspects of job demands, job resources, personal resources, commitment and engagement. We use JD-R theory as our framework for this qualitative study because of its flexibility in considering a wide array of job characteristics specific to a given job and because of its focus on positive psychology outcomes (Seligman and Csikszentmihalyi 2000) which includes potentially positive effects of work such as engagement and motivation.

41.2.2 Volunteering in India

Volunteering in India is shaped by constellation of factors that place great emphasis on 'daana' (charity) and social service, which is imbibed in religious ethos and a history of social reform movements. Historically seeing, volunteering in India was sprouted through four primary religions Hinduism, Islam, Sikhism, and Christianity (Mathew Cherian 2012). In Hinduism, 'dharma' (sacred duty) and 'karuna' (compassion) invigorated the exercise of 'daana' (giving/sharing, equivalent of philanthropy) giving donations of money, spending time to work towards their welfare and helping the poor and destitute as a part of human duty. In Islam, charity work is prescribed in the Holy Scripture through the ritual of 'zakat' and 'sadaqat', wherein a portion of one's income must be turned towards charity. In Sikhism, volunteering is imbibed in community practice and is a rich source of community building which happens in the form of 'seva' (service) to the society within non-religious and religious contexts. In Christianity, the rule of 'Tyeth' encourage individuals to set aside one tenth of the income for charity. Also, missionaries set up during British regime undertook charitable activities for the social welfare by running schools, and providing medical relief.

Alongside, volunteering decisions are also shaped by structural forces which include governmental volunteering programmes, compulsory volunteering programmes in schools and universities, deep-rooted presence of community volunteering opportunities through religious institutions, and role played by non-government organizations (Ghose and Kassam 2014; Handy et al. 2011). Volunteers, especially university and school students have a plethora of volunteering options, both formally and informally in NGOs and religious institutions (Ghose and Kassam 2014). In fact, there are several H&S NGOs focussed on education, Indian art and culture, and spirituality that are primarily run by full-time volunteers. While India is marked with a growing trend of volunteering with NGOs, there is a dearth of academic research scholarship on this sector (Ghose and Kassam 2014). This is particularly true for scholarship on full-time volunteers.

41.2.3 Humanitarian and Spiritual NGOs in India

With more than 118,101 different types of NGOs in India (Niti Aayog 2021), there is a significant number involved in humanitarian and spiritual activities which serve the society by strengthening the individuals spiritually and educationally. Such NGOs support nation's public services significantly while contributing in mitigating critical situation of developing countries (Ariza-Montes et al. 2020). Their survival and success depend heavily on identified partners, donors, registered members, and volunteers. Few of the well-established large and renowned H&S NGOs are committed to facilitate expanding human consciousness and fostering social harmony through their programmes. They offer several self-development programmes that facilitate in chiselling life skills, eliminating stress, and leading a fully functional life through workshops and guided sessions on yoga and meditation and dispensing practical wisdom for daily life. Other social initiatives include diverse humanitarian projects such as environment protection, education, women empowerment, child protection, and much more. Most of these NGOs are purely volunteer-led and require undivided attention and support of highly engaged and committed full-time volunteers. Despite being humanitarian and spiritual in nature, the work environment can often be emotionally and physically demanding for volunteers (Ariza-Montes et al. 2020), thus researching on the job characteristics of volunteering in such organizations is both timely and relevant.

41.2.4 Prior Studies from India

Studies from India featuring in reputed journals are quite limited. Rigorous literature search on several databases gave us only a handful of studies on Indian samples taking Indian perspective. Few significant studies from the past decade include exploring the experiences of women volunteering for health improvement (Banerjee 2011); identifying the structural and individual-level factors that motivate Indian student volunteers (Ghose and Kassam 2014); understanding personality, traits, values and self-efficacy beliefs of people who are drawn to volunteering (Bathini and Vohra 2014); and investigating the sustained engagement and its effects on long-term formal volunteers (Elias et al. 2016). Our study attempts to fill the dearth of literature on Indian volunteers.

41.3 Method

This study uses qualitative interpretive methodologies of phenomenology and narrative research to explore specific job demands and resources using the lens of JD-R theory. Interpretive research allows us to construct the reality that we know through

meanings and understandings garnered from our social world. Thus, in interpretive methods researchers become involved with their subjects in their respective social worlds. Also, the phenomenological and narrative techniques adopted in this study complement each other, as the lived experiences of volunteers interviewed are their reality, and thus their reality is embedded in their narrative. A well-designed phenomenological study has the potential to produce rich data, which can be generated from the in-depth interviews with people. This approach ‘studies the structure of various types of experience ranging from perception, thought, memory, imagination, emotion, desire, and volition to bodily awareness, embodied action, and social activity, including linguistic activity’. Similarly, narrative research uses stories to understand social patterns and provides an opportunity to explore personal experiences beyond the boundaries of a questionnaire. When combined, the analysis can give us robust findings and results that can uncover patterns from their experiences.

41.3.1 Participants and Data Collection

We collected primary data using judgement and criterion sampling approaches and included respondents who volunteer full time with H&S NGOs. The inclusion criteria specified participants should have a minimum of two-years of full-time volunteering experience with the NGO. Initially, the researchers approached 42 volunteers to participate in the study, of which 19 individuals agreed to participate; however, no additional participants were approached due to data saturation. The participants averaged 36 years in age and approximately 15.37 years of full-time volunteering experience. Profile of the participants is given in Table 41.1.

Before conducting the interviews with the full-time volunteers, we did field observations and indulged in informal conversations with the participants in the places where they worked. The principal researcher of this study is a part-time volunteer with one such NGO so she got access to make field visits and get familiar with the participants during November and December 2020. She developed a better understanding of their daily routine, work assignments, and their expectations from work. Thereafter from January to April 2021, she conducted the formal semi-structured interviews to get a better understanding of the demands of their work and what resources they had to manage these demands. The length of each interview was between 45 and 60 min. Interview schedule is shown in Appendix 1.

All the interviews were recorded and then transcribed into pieces of rich textual data to gain deeper insights and identify and explore themes to reaffirm the accuracy of the narratives and the interviews. To ensure trustworthiness and reflexivity in the research, we analysed data in a precise, consistent, and comprehensive manner. Two main authors, who took the responsibility of data analysis, met over Google Meet calls and heard the recorded interviews number of times before proceeding for analysis. We jotted down notes about the participants’ comments and questioned our own thoughts during the interview. We did the analysis systematically and retained all the notes that were used for analysis.

Table 41.1 Participants' profile

S. No.	Pseudonym	Age (in years)	Gender	No. of years in volunteering
1	Ajay	37	Male	13
2	Alok	38	Male	14
3	Anmol	51	Male	25
4	Anshul	32	Male	10
5	Himani	50	Female	25
6	Mayurika	35	Female	17
7	Meenal	32	Female	10
8	Raj	37	Male	17
9	Ram	38	Male	15
10	Ramesh	30	Male	11
11	Rashi	35	Female	20
12	Rashmi	27	Female	11
13	Sameer	38	Male	12
14	Shyam	27	Male	15
15	Ujwala	28	Female	20
16	Virraj	42	Male	11

The first step involved reading the text, piece by piece, and recognizing the underlying meaning. Meaning units were formed by clubbing phrases and sentences projecting similar meaning. This helped us in getting common themes and helped in grouping similar themes together to represent the theoretical framework. When we coded each new interview, we compared the themes and meaning units that emerged from the interview to previously coded interviews before conducting any further coding. We repeated this process until we achieved saturation point in the coded data.

41.4 Findings

The thematic analysis of the interview transcripts gave us six themes, which were then delved into using the JD-R theory to explore particular job demands and job resources experienced by the full-time volunteers.

41.4.1 Full-Time Volunteering Related Job Demands

Three themes emerged as job demands—challenge of adaption, challenge of persuasion, and challenge of facing derision.

Challenge of adaption: First significant job demand faced by the respondents was the challenge of adapting to changing tasks, environment, places, culture, and food arising from their diverse work assignments. Sometimes they were engaged in social projects; sometimes they had to travel to various cities for conducting workshops on life skills, stress management, meditative techniques, etc. Ten participants categorically mentioned that full-time volunteering is not like a usual 9–5 job, rather it has plenty of uncertainty in the environment, conditions, and stability of the job. Raj, 37, male, feels that the unpredictability of the job gets intense sometimes and makes things difficult for him. *‘This is not a routine ride, not like daily you are following the same routine of leaving early in the morning and then coming back at fixed time and sleep. It doesn’t work like this. In full-time volunteering, sometimes you are at one place and you have no idea where you will be in next few days. It’s a very unconventional path, not like a regular job’*.

The challenge of adaption closely resonates with the resistance to change. Humans are usually adamant to commit to any form of change as they consider it as an interference in their normal routine life sometimes causing disturbance in their social life as well (Strebel 2009). While change is inevitable, coping with the changing environment and adapting to it causes stress in individuals, as it leads to increased work pressure, problem in adapting to changed environment, increased expectations, etc. (Schweiger and Denisi 1991). Challenge of adaption is a job demand for full-time volunteers as along with the stress and anxiety caused by a new place and atmosphere; it also involves spending time in unnecessary and unwanted coordination. In our study, full-time volunteers are sometimes uncertain about their next assignment, accommodation, daily food, and travel arrangements which causes dissonance and uncertainty in their work environment causing physical strain.

Challenge of Persuasion: Next job demand which emerged from the thematic analysis was the challenge of persuading people to get associated with H&S NGOs, join various courses on life skills, and take a chance to experience their activities. Fourteen participants reported that persuading new people to try their various programmes was an integral part of their volunteering work. As such, whenever they approached people for such things, either they would not listen or show negligible interest. The reaction from the common public sometimes would get so negative that it pulled down their motivation. Rashmi, 27, female, says, *‘While distributing pamphlets to people about the upcoming courses sometimes it gets so depressing as people are not even ready to accept the pamphlets...Once, I was giving a talk about mediation, in middle of the talk itself people started leaving the hall which was very discouraging’*. The participants also felt that even when they went with full conviction to persuade people they had to face failure, which led them to self-doubt about their chosen path. Raj, 37 says, *‘I had doubts about my ability like will I be able to teach such life skills to people properly? Will people listen to me? Will I become a good volunteer?’*.

Persuading people for a constructive and positive purpose has always been a tedious task because humans have a powerful hold on their pre-existing beliefs and conviction (Svoboda 2017). They often build walls around their opinions and beliefs when they feel that their view point is correct which is particularly true for people who

tend not to believe in meditation or other life skills (Rogers 2013). This holds especially true for Indians who tend to have their own firm ideologies and are unreceptive to others' ideas. This challenge to convince people acts as a job demand because people's reluctance and resistance is often reflected from their body language, which brings negative emotions in the volunteers causing mental exhaustion and strain.

Challenge of facing derision: The last theme that emerged as a barrier in their work was the derision received from the society. Volunteers experience farce from their friends, family, and relatives because of their decision to be full-time volunteers. All nineteen participants revealed that as they chose to take this path, their decision was mocked at and ridiculed by the people around them as devoting one's whole life for the purpose of volunteering is unusual and not quite accepted in the Indian society. This has continued for many of them even after spending five to six years in volunteering. Raj, 37, male, mentioned that he experienced leg pulling from people around him, *'From friends and relative side there were negative comments like you have done the biggest mistake of your life, he has become a saint (baba ban gaya), this is not the age to enter this path. Till now they think that I have done the biggest mistake of my life'*. Viraaaj, 42, male, stated that his decision was highly criticized on the ground that he preferred volunteering life to a normal job-oriented life.

Teasing or mocking in a potentially insulting and aggressive in manner leads to high levels of stress, anxiety, depression, and in some cases suicide too (Holt et al. 2015; Klomek et al. 2008). Listening to taunts about from friends and known people about unusual choice of lives particularly causes stress (Dietrich and Hofman 2020), which is common in the Indian society. Participants mentioned they had to continuously deal with such negativity while devotedly continuing with their volunteering work. This acts as a severe job demand as it puts them in an emotionally and psychologically tense situation creating hurdles in their work and causing psychological strain.

41.4.2 Full-Time Volunteering Related Job Resources

Opportunity to serve: The first and the most important job resource theme which was common in all the interviews was the opportunity to serve the society through this work. All participants stated that after their initial experiences as informal or casual volunteers they realized that people's lives could be impacted for good through their work which aroused the feeling of doing *seva* (meaning selfless service) within them. Their main motive to join full-time volunteering was the desire to serve humanity. Himani, 50, female, says, *'I realized that till now I had lived my life for myself and as a result of that my life was losing its meaning. When I started to volunteer, it gave me a chance to live my life for others, due to which my life automatically started gaining more meaning and became resourceful. I had lived enough for myself and my needs, now that I have received something in my life, I believe I should share it with others also in the form of seva'*.

Psychic altruistic motivation of helping others in need is a strong factor that motivates full-time volunteering (Black and Di Nitto 1995; Harmon-Darrow and Xu 2018). Full-time volunteering in itself is described as a selfless act (Millette and Gagné 2008; Same et al. 2020), which in Indian culture is a highly venerated value in the form of ‘*seva*’ or sacred activism. Full-time volunteers who are in a way sacred activists for H&S NGOs, experience inner bliss and outer efficiency of their work through their volunteering (Pio and Syed 2014). Since intense spiritual crisis is often resolved by selfless compassionate acts, they commit to be the source of wisdom, energy, hope, and change through their volunteering duties (Pio and Syed 2014). Opportunity to serve acts as a vital job resource for full-time volunteers in H&S NGOs as it assists in dealing with the repercussions of the challenges while nurturing them with compassion, empathy, and overall development.

Opportunity to meditate: Another theme which came up as a job resource was the opportunity to meditate, which is extensively present in H&S NGOs. While the desire to serve brought peace to all the participants, the power of mediation inspired them to keep moving on this path despite the challenges, which worked as an essential job resource. Few participants reported that when they taught a course on meditation as a part of their work, they saw tremendous changes in their own lives too. Alok, 37, male, said, ‘*I volunteered to teach meditation to a group of Kashmiri terrorists, which was the most challenging assignment I had ever received. Believe it or not, the meditation they did had such stupendous effects that they changed their violent lifestyle and eventually led down their arms and ammunitions. This made me realize the worth of my work and that if meditation could make this happen, it could definitely take away the stress I undergo sometimes*’. Every participant mentioned that an important factor leading to their strong engagement was the opportunity to discover the power of meditation, which brought optimistic and life changing effects in their lives and others’ lives.

India is the birthplace of various meditation techniques which enhances mindfulness in individuals by directing one’s attention towards the present (Unsworth et al. 2016). Technically, sound breathing techniques are found to be beneficial in dealing with depression, anxiety and post-traumatic stress order (Rain et al. 2021); regular practice of Vipassana meditation helps in overall well-being and reduction in health issues (Krygier et al. 2013; Vivot et al. 2020); ‘*sudarshan kriya*’ has been found to be effective in dealing with emotional and mental challenges (Bhaskar et al. 2020; Brown and Gerbarg 2005). When volunteers experience these positive effects of meditation, they use it as a resource to cope up with the everyday demands and challenges of their work, which stimulates their well-being and spiritual growth.

Opportunity to travel: Next job resource that emerged was the opportunity to travel which often adds leisure in their work. Thirteen participants explicitly mentioned that their NGO required them to travel to different places often to various regional centres, and this specific aspect of travelling resonated very closely with their passion for travelling. Because of this, work did not seem a burden but rather a blend of work and leisure. Participants mentioned that though the task is tedious, the opportunity to travel brings them the satisfaction of visiting different places and experiencing

different cultures closely. They get to new people, face new kinds of challenges, and try new kinds of cuisines, which is a big perk for them.

Ajay, 37, male, says, *'I am very fond of traveling. In this volunteering service, I travel so much and meet so many new people that I am always energized to receive my next assignment. My bag is always ready, my energy is always up and I look forward to doing my duty every single day, even though I know the day may come with its own challenges and difficulties'*.

When work gets combined with leisure, it acts as a vital job resource that tends to reduce the load created by the work assignments, while stimulating growth and development. Individuals who have fun in their work have significantly lower emotional exhaustion and emotional dissonance (Karl et al. 2007) and experience an overall contentment in life, thus promising a better work and leisure equilibrium (Haworth and Lewis 2005). Leisure in work helps in better problem solving, enhanced work values and ethics, and overall improvement in health and well-being. Presence of travel in the volunteering work is deeply appreciated by full-time volunteers as they get to explore new places as a part of their work. This helps them replenish their resources or recover from work by involving in activities that are freely or intrinsically chosen rather than externally prescribed and regulated (Sonnetag and Zijlstra 2006). Opportunity to travel reduces the work stress, helps them cope with challenges, and inspires them for holistic growth and development.

Community Connect: The last theme that featured as an essential job resource for full-time volunteers was the connectedness with their community. Here connectedness refers to the community feeling that is nurtured within the organization as all volunteers feel a sense of belongingness which helps them engage more deeply with their work, which was endorsed by each and every participant. Anshuman, 38, male, mentions *'I had a hard day that day persuading some people to join our classes. In the evening, when I returned to the centre, I was not in my best spirits. Many volunteers had gathered there and we all were sitting together, volunteering for another event. The community feeling is so strong here that when I discussed my bad day with them, they gave me such beautiful perspectives that I forgot all my hardships of the day. I felt much better, and got relieved of the stress only because of my community friends. After that, I worked for hours continuously as one big happy family and the kind of belongingness I felt was quite intense'*.

Community connectedness is a natural desire of a human being to belong to a larger group and develop an influential relationship with the group in order to satisfy one's own needs (Mcmillan 2011; Whitlock 2007). This acts as an important resource which fosters social support and acts as a potential buffer against many kinds of job stress (Bakker et al. 2005). Connectedness with fellow colleagues and the social support received from them helps them give their best in the work as the work starts appearing interesting and significant when they experience respect and acknowledgement (Metzer 2003). Full-time volunteering comes with its own challenges but when volunteers have the unconditional support of their friends and colleagues, they experience connectedness, ask for their help, which helps them do their task more efficiently and gain autonomy. Thus, community connect has the

Table 41.2 Themes and related phrases

	Main theme	Related phrases used by participants
Job demands	Challenge of adaption	Roller coaster ride, juggling, unpredictable, uncertain, ups and downs
	Challenge of persuasion	Difficult to persuade, people just won't listen, hard time convincing, changing people's mindset was a big challenge, how to make someone understand
	Challenge of social derision	People mocked at me, friends made fun, faced criticism, handling derisive comments, I had become a joke for my neighbourhood
Job Resources	Opportunity to serve	Feels good to do 'seva', want to contribute to the society, inspired towards social work from childhood dedication and passion for seva and social work, what can I do for others, living life for oneself is so selfish...living life for others is self-less
	Opportunity to meditate	Meditation gave me the strength to keep going, mediation helped me realize the deeper meaning of life and wisdom, meditation experience was intense and I knew that this is what I want to do, Mediation helps me calm my mind after a hard day's work
	Opportunity to travel	Travelling is exciting, overwhelmed to know that I was travelling to the south, look forward to travelling,
	Community connect	Connection with other volunteers, we call each other with a common name, I feel a sense of community, common identity, look forward to meeting other volunteers, feels good in each other's company

potential to buffer the impact of the challenges of their work and play an important role in achieving their work goals, while stimulating their growth.

Table 41.2 highlights all the themes and related phrases.

41.5 Discussion

Our findings reveal that unique job demands in the context of volunteering, which includes challenge of adapting to new environment for every new assignment, the challenge of persuading people to experience the activities of their NGO, and the challenge of being mocked at because of their decision to do full-time volunteering. Facing these challenges almost every day, volunteers often experience stress, strain, fatigue, emotional exhaustion, and irritation. Nevertheless, the volunteers get engaged in their work and are motivated with high energy due to the presence of significant job resources in their work which includes opportunity to serve, meditate, travel, and connect. These facets are significant for full-time volunteers as they facilitate in reducing the demands and achieving the work goals, while enhancing

their self-worth and overall development. We present our discussion in the following three points.

First, volunteering in H&S NGOs combines high demands with high resources, thus making volunteering work as active job (Karasek 1979). This challenges the full-time volunteers to engage in positive activities, learn new things, interact with new environment, thus motivating them to use new positive behaviours. Consistent with our proposition based on the JD-R theory (Bakker and Demerouti 2017), the findings show that these unique resources are able to diminish the negative influence of the job demands on engagement levels of the full-time volunteers. This is in line with previous research on volunteer engagement (Dal Corso et al. 2019; Lewig et al. 2007) as we see that the volunteers feel vigorous, absorbed in their work, and totally dedicated despite facing high job demands only because they consider their job resources to be very high and much stronger compared to the job demands.

Second, decision to engage in full-time volunteering is a result of strong intrinsic motivation when volunteers feel an inner calling to serve the society and to do something different. This intrinsic work orientation is particularly beneficial as it has the potential to strengthen the impact of intrinsic job resources and directly affect volunteers' well-being (van den Broeck et al. 2011). In line with JD-R theory, we find that job resources revealed from our study are all intrinsic in nature which contribute in buffering the impact of job demands on the volunteers' strain. Typically, the buffering process explains interactions between demands and resources by proposing that the relationship between demands and strain is weaker for those enjoying a high degree of resources. Consistent with this, our findings suggest that full-time volunteers experience high levels of work engagement because the negative relationship between job demands and work engagement is weaker for them as they enjoy high job resources.

Third, volunteers benefit most from the job resources (in terms of work engagement) especially when they experience high demands. For instance when they have a hard day persuading people to join their NGO activities or when they face social mockery from their known people, they look forward to calm their minds through daily meditation. While the job demands of persuading people, adapting to new environment, or facing derision lead to their energy depletion consequently evoking stress in them, the presence of stronger job resources such as opportunity to meditate or travel buffer the impact of these demands by giving them hope, optimism and strengthening their resilience (Bakker et al. 2005). Volunteers utilize the bliss derived from job resources to keep their spirits uplifted and get immersed in their work, which is in line with previous research in volunteering (Harp et al. 2017; Huynh et al. 2012; Lewig et al. 2007).

41.6 Conclusion

Given the high levels of work engagement in full-time Indian volunteers, this study aimed to explore the job demands and resources as applicable in volunteering in H&S NGOs adopting qualitative approach and analysing it using JD-R theory. Thematic

analyses of the interviews revealed three unique job demands—challenge of adaption, challenge of persuasion, and challenge of facing derision; and four job resources—opportunity to serve, opportunity to meditate, opportunity to travel, and community connect. Further analysis of the themes suggested that the job resources have the potential to buffer the effects of the job demands by altering the perceptions and cognitions evoked by the challenges in the work and lessening the stress created from it. The study adds to the limited literature on perceptions of full-time Indian volunteers towards the demands and resources specific to H&S NGOs. Precisely, the study suggests that availability of high levels of job resources can reduce the strain caused by job demands and motivate the volunteers to feel engaged and motivated.

This study has important implications for NGOs that need a strong base of engaged volunteers. While volunteering is an age-old tradition in India, it has gained attention in the world of academic research in the past one decade (Huynh et al. 2012). This study provides a deeper understanding of how other NGOs can also garner more engaged volunteers by leveraging on specific job resources and strengthening community connect. First, the study reveals the perceived challenges of the volunteering work as the key job demands. While some job demands are inevitable to the work, others, if managed better, can reduce strain on the volunteers. For instance, the challenge of adaption can be reduced if assignments that befit the cultural background of the volunteers are assigned to them. Second, the study points out that individuals who become full-time volunteers have a distinct desire to serve the society and connectedness with the organization gives them motivation to render their duties with dedication. As such NGOs can work in the best interests of the volunteers, invest time in understanding their needs, and design volunteering activities that sync well with their needs. For instance, if a volunteering work includes travelling, individuals with a passion for travel can be utilized for such work. Also, one of the important motivational needs is the need to feel belong or connected with the NGO community, as such NGOs can devise ways to instil belongingness among the volunteers by doing exclusive group activities, using a common name to call each other, having a uniform while rendering duties, or organizing volunteer chapters. And third, if NGOs are able to enhance the job resources given to the volunteers, it will have potential to reduce the effects of job demands in the volunteering work, which at times are inevitable. Enhancing the job resources specific to the volunteering work can lead to positive consequences for both the volunteer and the NGO. By providing a work environment that values and recognizes the volunteers and ensuring that volunteers understand and own the values of the organization, NGOs can work efficiently and contribute more to society with a base of full engaged and soulfully invested full-time volunteers.

Appendix

Interview Schedule

1. Tell me something about yourself.
2. How did you get introduced to volunteering?
3. What made you join this NGO precisely?
4. What kind of challenges have you faced or do you face in your volunteering work?
5. How do you overcome them?
6. What is the best part(s) of your volunteering job?
7. How has the journey been so far?

We also asked questions around communication, general and organizational socialization, relationships with other volunteers and so on.

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Chapter 42

What Engages Teachers of Higher Education Institutes of India?

An Empirical Study Using Job Demands and Resources Theory



Seema Sharma and Santoshi Sengupta

42.1 Introduction

The system of higher education of any nation plays a vital role in promoting societal and economic development by boosting human capabilities, augmenting technical competencies, and accelerating scientific and institutional changes in the society. Since there is a significant relationship of higher education with the index of human development and upliftment of the deprived groups (Joshi 2006), they face the challenge of being center of excellence for teaching and research, especially in the context of India. This has raised the bar for universities to teach students who are ever-increasing in various specializations and subjects. Along with this, universities have the additional responsibility of paying more and more interest to the overall quality of various teaching and academic programs of the universities (Smeby 2003).

Teachers teaching in the higher education institutes (HEIs) of India are increasingly facing the challenge of multiple duties over and above academic teaching which may include excessive documentation, doing research, publishing papers, working on projects, and working on administrative roles parallelly with their teaching load. This has put huge amount of stress on teachers of HEIs which has largely impacted their performance and their well-being. One form of occupational well-being is work engagement. It is a positive and rewarding state of mind related to the work which has its main facets as—vigor, dedication, and absorption (Schaufeli et al. 2002). Indeed, work engagement is vital for any organization as it contributes to its bottom line (Demerouti and Cropanzano 2017) and is positively related to in-role (core

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academic duties) and extra-role performance (administrative duties, research work) (Schaufeli et al. 2006).

There can be several characteristic features of teachers who are engaged which may include persistent resourcefulness, proactive nature, capability to get engaged (May et al. 2004), and energetic responses to work-related challenges which enable HEIs to flourish in the highly competitive environment. These are a few such psychological perceptions that have resonance with economic research that associates employee happiness along with more continual attention and greatly improved positive outcomes. In true sense, the value of achieving and sustaining positive state of teachers' occupational well-being (work engagement) has continuously been identified as favorable to continuous productivity.

An HEI in India can thrive if its teachers are well-engaged in their jobs and exhibit high levels of facets such as vigor, dedication, and absorption. After all, if work engagement is high, it can have positive benefits on the individual (enhanced performance, enhanced well-being, increased levels of satisfaction) as well as the organization (increased productivity, increased organizational commitment). Work engagement of teachers has negative relationship with burnout as well as intention to quit (Hakanen et al. 2006). Thus, it becomes important for HEIs to find out factors that may positively affect the teachers and make them more engaged in their work.

JDR theory is the most extensively used theory to study work engagement. This theory suggests that job demands and resources initiate two different processes. It includes a health-impairment process and a motivation process. Health-impairment process through burnout and exhaustion is caused by job demand, and motivational process through engagement is caused by job resources. Several studies show that individuals with many job resources are able to manage better with the demands of the job and show high levels of engagement (Bakker and Bal 2010; Xanthopoulou et al. 2007). Every job or organization may have specific job demands and resources depending on the job characteristics that prevail (Bakker and Demerouti 2017).

Since the job of a teacher in an HEI in India has its own unique facets, we cannot learn about it from existing knowledge of work engagement which is dominated by research in the corporate sector and product-based industries. Also, individuals become teachers in HEIs for higher needs to make impact in the lives of students without being involved in the business and profitability concerns. Prior research in the domain of work engagement and higher education institutes in the Asian context has evidence from countries such as China (Zeng et al. 2019), Philippines (Bay et al. 2014), Pakistan (Nayyar et al. 2013), Jordan (Alzyoud et al. 2015) and has taken different characteristics of job demands and job resources as applicable in the teaching job HEIs in their country. However, there is dearth of research in studying the factors contributing to work engagement in teachers of HEIs in India.

In this study, we use JDR theory to examine the effects of demands, resources of jobs along with personal resources as applicable in teaching in HEIs of India to gain a deeper insight as to what factors impact the work engagement levels of teachers of HEIs in India. We use this theory for two reasons. Firstly, its flexibility can help consider wide range of job characteristics in relation to teachers' work engagement, thus allowing us to explore unique job characteristics that are appropriate to teaching

in HEIs. Secondly, the theory recognizes the significance of positive psychology by focusing on positive outcomes (Csikszentmihalyi and Seligman 2000) and includes many positive effects of work. Also, in our study, we particularly focus on individual level through a survey method to gauge the perspectives job demands, personal resources, and job resources and analyze it to find out how these affect the levels of engagement. We believe such an approach will help us build a more advanced and deeper understanding of job demands and resources pertaining to teaching job in HEIs.

We address the knowledge gap of finding our specific job demands, personal resources, and job resources that affect engagement in work, and the geographical gap of studying the teachers in HEIs of India. Since the recognition of specific antecedents of work engagement is progressively becoming interesting for scholarly research (Biggs et al. 2014), we attempt to fulfill the following objectives through our study:

1. To study the difference in job demands, personal resources, job resources, and work engagement with respect to gender, marital status, and age of teachers of Indian HEIs.
2. To study the relationships of job demands, personal resources, job resources, and demographic variables with work engagement.
3. To study the effects of job demands, personal resources, job resources, and demographic variables on work engagement

42.2 Literature Review

42.2.1 *Job Demands-Resources Theory (JDR Theory)*

We draw on the theoretical frameworks of JDR theory (Bakker and Demerouti 2017) to find out the specific job demands, personal resources, and job resources of teachers in HEIs that make them highly engaged in their work. The theory explains the concepts of job demands, personal resources, and job resources and work engagement. Job demands are those characteristics of a job that are either physical, social, psychological, or related to an organization and require continued efforts which are physical or psychological. Job resources are those characteristics of the job that are useful in goals achievement; job demands reduction; and growth, learning, and development stimulation. Personal resources are the positive beliefs such as self-efficacy, optimism, hope, and resilience that individuals have about how much control they have over their environment and they can cushion the detrimental effects of demands on strain and increase the necessary impact of demands on motivation (Bakker and Sanz-Vergel 2013). Work engagement is a positive, fulfilling, work-related state of mind which influences a variety of employee and organizational outcomes in a positive way and helps in achieving the target of an organization (Schaufeli et al. 2006, p. 702). Vigor refers to the high energy levels; dedication is the strong involvement

in one's work, and absorption is being fully focused and happily immersed in one's work.

42.2.2 Indian Higher Education Institutes

India is the third largest in higher education in the world when it comes to its size and diversity. Growing rapidly since independence, the higher education system of India today comprises of 33,657 institutions, which includes 634 universities and approximately 33,000 colleges. HEIs have witnessed sturdy increase in the past couple of years. HEIs in India are divided into two categories which include universities and colleges. Universities are regarded as autonomous bodies and have colleges which are affiliated to them. Universities have the main responsibility for maintaining quality in the education system. HEIs of India function in an ever-changing environment of demography, political and economic state, and philanthropy with their attention on access and equity. HEIs are effectually short autonomous cities which have their own self-governance, economic, social, and cultural systems. They are considered as real-time labs where citizens get trained and groomed for future endeavors. With the help of demonstration of significant research and practices, sensible and responsible students can be nurtured, which can enable HEIs to proceed for sustainable development. Sustainable development of an HEI flourishes in the aid of education, research, social outreach, technology, and various administrative management.

HEI sector has undergone three phases—government funding to philanthropy to public, to private financing. These changing patterns of financing have changed various regulations, efficiency, and quality-related aspects of higher education, and have also affected the characteristics of the job in terms of what demands are put by the job and what resources are facilitated.

Job demands specific to HEIs of India: Some of the job demands which make lots of differences in the working conditions in HEIs are role conflicts, work pressure, and emotional demands. Since there is lot of role ambiguity (teacher v/s researcher versus administrator) among the faculty members as they feel stressed to fulfill all the commitments of jobs with time limits, it turns into work pressure which leads to emotional disturbances. It also affects men and women teachers differently as women are more vulnerable toward the family responsibilities so fulfilling dual roles simultaneously with time-bound activities is hard for the women teachers. In some previous studies, it is seen that women exhibit high emotional exhaustion, whereas men exhibit high depersonalization. For women, emotional exhaustion is caused by the fact that work family interference weakens their ability to construct and maintain a positive family-related image. For men, work family interference specifically negatively influences the professional image. Among higher education, however, there might be the same relationship since their professional identity is influenced by those professionals socializing with students and colleagues in universities and institutes.

Job resources specific to HEIs of India: Autonomy is the extent to which a given task provides expected required independence, freedom, and responsibility in

arranging the work and in defining the procedures that are required in pursuing it. In our higher education institutes, teachers lack autonomy in the working fields. It is obvious that every employee works for the development, and due to the urge of being upgraded and developed, employees adjust and do as per the higher committee rules and order. A very important resource from the supervisor's part is their support, which can be in the form of their direct help, supporting emotionally, advising, or even giving feedback (Cole et al. 2002). A team member may want to engage in additional responsibilities and give the same support to their supervisor as they received.

Personal resources specific to HEIs of India: Personal resources are related to resilience and connected to sense of individual capability of controlling and influence their environment in a successful manner. In the present study, we included two important personal resources, that is resilience and optimism as basic elements of individual adaptability. Feeling pressure of publications and to do more and more in the teaching profession in higher education in Indian Context make teachers little hopefulness and decline in confidence level about the future or the success of something. Personal resources help to enhance resilience and have positive impact on physical well-being and emotional well-being. Moreover, these resource levels are affected by various factors such as environmental factors and other personal factors. Personal resources can moderate or mediate the relationship between factors in environment and outcomes of organizations. They may also ascertain the way in which people interact with their environment, construct it, and respond to it accordingly.

42.2.3 Employee Demography

The study of structure of a social singular characteristic regarding its members' traits can be described as employee demography (Pfeffer 1985). This includes age, gender, profession, salary, positions, marital status, standard of living, family involvement, rural or urban, and other demographics variables. These variables are usually added when they have explanatory meaning in the study (Edgar and Geare 2004). Employee demography enhances the beauty of searching the original human being and takes out what is beneath his or her mind and the soul as the influence of attitudes toward HRM and is respected in research on relevant domains (Edgar and Geare 2004). This is appreciable that demographics have an impact on the employee attitudes and perspectives of an individual. Therefore, choosing employees with features can be seen to convey the deficiencies in the workforce to fill up all the areas (Fitz et al. 2003). It should also be noted here that demographic characteristics such as age, cultural group, educational level, personal choices, personal beliefs, and compensation may have effects on the expectations of job, which ultimately have effect on their job-related attitudes (Bluedorn 1982). It is important to do a study considering employee demographics and to study if the job demands, personal resources and job resources have any variation with these physical characteristics as they may help to understand the differences in attitudes.

42.2.4 Hypotheses Development

In the present study, we acknowledge the effects of age, gender, marital status, and family type on job demands, personal resources and job resources, and work engagement. Gender is a very important demographic variable that can have significant effects on employee attitudes. There are significant differences in males and females as far as attitudes and perceptions are concerned. Prior research suggests that job demands and resources are perceived different by males and females. Similarly, marriage is one of the most crucial changes in the transitional events in adults' social life (Lucas 2007). Marriage can be very satisfying and have a positive impression on well-being. It is observed that employees who are married show higher well-being as compared to the employees who are not (Lee 1991). In addition to this, age has associations with difference in attitude and behavior. It also has associations with experience and knowledge (Wehrmeyer and McNeil 2000). Thus, we hypothesize that:

H1a: There is a difference in job demands, personal resources, job resources, and work engagement between male and female teachers of Indian HEIs.

H1b: There is a difference in job demands, personal resources, job resources, and work engagement between married and unmarried teachers of Indian HEIs.

H1c: There is a difference job demands, personal resources, job resources, and work engagement among different age groups of teachers of Indian HEIs.

H2a: There is a negative relationship between job demands and work engagement.

H2b: There is a positive relation between job resources and work engagement.

H2c: There is a positive relation between personal resources and work engagement.

H2d: There is a relationship between demographic variables of gender, marital status, and age with work engagement.

H3: There is an effect of job demands, personal resources, job resources, and work engagement on work engagement.

42.3 Method

42.3.1 Sampling and Data Collection

Data collection was done from April to August 2022 using an online survey. The survey was sent to 600 teachers working in HEIs, out of which 206 responded and filled the complete questionnaire. The Cronbach's alpha of the questionnaire came out to be 0.897.

42.3.2 Measures Used

Job Demands: We used JDR questionnaire which was developed by Bakker et al. to measure three job demands—emotional demand, work pressure, and role conflict. Participants provided Likert ratings of how they rate the items on a scale of 7 (1 = never, 7 = almost always). Emotional demand includes six items. Participants provided Likert ratings of how they rate the items on a scale of 7 (1 = never, 7 = almost always). These statements were to be rated on a scale of 7 (1 = strongly disagree, 7 = strongly agree).

Job Resources: We used JDR questionnaire which was developed by Bakker et al. to measure three job resources—autonomy, social support, and opportunity for development. Autonomy was measured using three items on a 7-point scale (1 = never, 7 = almost always).

Sample item was ‘Do you have flexibility in the execution of your job?’. Social support was measured using three items on a 7-point scale (1 = never, 7 = almost always). Sample item was ‘If necessary, can you ask your colleagues for help?’ Opportunity for development was measured using three items on a 7-point scale (1 = strongly disagree, 7 = strongly agree).

Personal Resources: We used JDR questionnaire to measure two personal resources—optimism and resilience. Optimism was measured using four items on a 7-point scale (1 = Totally agree, 7 = Totally disagree). Resilience was measured using six items on a 7-point scale (1 = strongly disagree, 7 = strongly agree).

Work Engagement: We used JDR questionnaire to measure work engagement using nine items on a 7-point scale (1 = strongly disagree, 7 = strongly agree).

42.4 Findings and Discussion

We gathered information about the personal profile of the respondents which included gender, marital status, age, and education. Gender had two categories—female (112) and male (94). Marital status had three categories—unmarried (44), married (106), and divorced/widowed (56). Age had five groups—< 30 (37), 30–35 (43), 35–40 (34), 40–45 (49), and more than 45 (43). The details are shown in Table 42.1.

42.4.1 Comparison of Job Demands, Personal Resources, Job Resources, and Work Engagement Across Various Demographic Variables

Work pressure, emotional demands, role conflict (three job demands), autonomy, social support, opportunity for development (three job resources), optimism,

Table 42.1 Personal profile of the respondents

Demographic variable	Groups	Number
Gender	Male	112
	Female	94
Marital status	Unmarried	44
	Married	106
	Divorced/widowed	56
Age	< 30	37
	30–35	43
	35–40	34
	40–45	49
	More than 45	43
Type of family	Nuclear	116
	Joint	90

resilience (two personal resources), and work engagement were compared across demographic variables of gender, age, marital status, education, and type of family.

T-test was done to compare the job demands, personal resources, job resources, and work engagement across male and female employees and across nuclear and joint family types. Of all the factors that were tested, only work pressure had significant difference between male and female employees and resilience had significant differences between employees from nuclear family and joint family. According to our results, it was found that male employees perceived greater work pressure than female employees. This difference can be attributed to two reasons. First is that when it comes to administrative responsibilities in the education sector, males are entrusted with many additional roles such as being part of proctorial boards, anti-ragging squads, discipline committees, admission duties, examination duties, etc. Due to these, male employees have to do several duties other than their core teaching duties which adds a lot of pressure on them. Another reason can be the gender difference in which males perceive their job responsibilities to be more stressful as they are not able to seek support from their counterparts, something which female employees are able to do easily.

Another interesting significant difference was found in the personal resource of resilience. It was found that employees from joint families showed higher resilience compared to employees from nuclear families. This is an interesting finding as teaching in HEIs has become quite a challenging, complex, and stressful job as teachers are expected to do multiple duties of teaching, research, and administration. Of these, research comes with a lot of challenge and rejections of papers may result in stress. At this point, resilience is a very important personal resource that helps teachers in HEIs to beat the stress and bounce back from the failures. According to

our findings, employees from joint families show greater resilience as compared to teachers from nuclear families. The reason is simple that joint families, especially in India, provide a lot of social support and act as anchor in low times. Teachers who live in joint families often have their parents and brothers’ families staying under the same roof which provides them with ample scope to overcome the stress they get from failures at workplace (Table 42.2).

One-way ANOVA was done to compare the means across the demographic variables that had three or more categories. Essentially, we used ANOVA to compare the means of job demands, personal resources, job resources, and work engagement across the various categories of marital status, age, education, and designation. Of all these categories, significant differences were found in optimism, vigor, and dedication across the categories of age. In all these variables, employees who were more than 45 years in age showed the highest optimism, vigor, and dedication, followed by employees in the lower age categories. This finding is also very interesting as prior research shows employees between 30 and 40 show very high levels of vigor and dedication, which is contrary to our results show. This can be attributed to the specific context of HEI. In higher education, as teachers grow in age and experience, they become more knowledgeable about their fields and thus show more dedication in their work (Table 42.3).

Table 42.2 Difference in work pressure and resilience based on gender and type of family

Gender	Female		Male		t-value
	N = 112		N = 94		
	Mean	SD	Mean	SD	
Work pressure	4.94	1.2	5.3	1.07	2.23*
Type of family	Nuclear family		Joint family		t-value
	N = 116		N = 90		
	Mean	SD	Mean	SD	
Resilience	4.53	1.01	4.59	1.06	2.792**

Table 42.3 Difference in optimism, vigor, and dedication based on age groups

	Age group 1 (< 30)		Age group 2 (30–35)		Age group 3 (35–40)		Age group 4 (40–45)		More than 45		F value
	N = 37		N = 43		N = 34		N = 49		N = 43		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Optimism	5.25	1.23	5.29	1.24	5.48	0.96	5.87	1.04	5.90	1.1	3.95**
Vigor	5.16	1.23	5.27	1.24	5.37	0.96	5.79	1.04	5.89	1.1	3.47**
Dedication	5.61	1.29	5.96	1.31	5.87	1.34	6.05	1.03	6.45	0.87	2.77*

42.4.2 *Relationships of Job Demands, Personal Resources, Job Resources, and Demographic Variables with Work Engagement*

For testing our second hypothesis, we used Pearson's correlation to test the relation of independent variables with dependent variables. Our independent variables were work pressure, emotional demands, role conflict, autonomy, social support, opportunities for development, optimism, resilience, and gender, age, marital status, education, designation, and type of family, and our dependent variable was work engagement. Pearson's correlation showed significant relationships of work engagement with two job demands, viz., work pressure and role conflict, all three job resources, viz., autonomy, social support, opportunity for development, and one personal resource, viz., optimism, and one demographic variable (age).

Prior research shows there is an inverse relationship between job demands and work engagement and interestingly; in our results, only role conflict had negative correlation but work pressure had positive correlation with work engagement. This implies that for teachers in HEIs, the more work pressure they experience, higher their work engagement. Similarly, all job resources had significant positive relations with work engagement implying that more the teachers in HEIs have access to autonomy, get social support, and find opportunities for development, more engaged they are in their work. Optimism is a personal resource that has significant positive relation with work engagement which implies that teachers of HEIs who are optimistic show greater levels of work engagement as compared to teachers who are less optimistic. In demographic variable, age has significant positive correlation with work engagement implying that as teachers grow in age, they show greater levels of work engagement (Table 42.4).

Table 42.4 Correlations of job demands, job resources, personal resources, and demographic variables with work engagement

Independent variables	Correlation coefficients
Optimism	0.646**
Opportunity for development	0.645**
Autonomy	0.467**
Social support	0.458**
Work pressure	0.354**
Role conflict	- 0.172*
Age	0.209**
Emotional demand	- 0.030
Resilience	0.122
Gender	0.038
Marital status	0.107
Family type	- 0.088

42.4.3 Effects of Job Demands, Personal Resources, Job Resources, and Demographic Variables on Work Engagement

To test our last hypothesis of finding the effects of independent variables (job demands, personal resources, job resources, and demographic variables) on dependent variable (work engagement), we ran a stepwise regression on SPSS 23.0. Thirteen variables are entered as independent variables, and work engagement is entered as dependent variable. The result showed significant effects of optimism (personal resource), opportunity for development, social support (job resource), and work pressure (job demand) on work engagement. These determinants explain 58.5% of variation in work engagement. The individual contribution of the determinants is optimism (40%), opportunity for development (32%), work pressure (16%) and social support (13%). Personal resource of optimism is indeed a very important factor in determining work engagement in an individual. Especially in the occupation of teaching in HEIs in India, teachers who are optimistic, i.e., who have hopes for the future, have action plans, and rigorously work toward goals show higher levels of work engagement as compared to those who are not. Similarly, opportunity for development is an important job resource which has the potential to positively affect work engagement. When employees find opportunities for growth and development in the work they do and favorable policies by the organization for their career paths, they show higher levels of engagement. A very interesting finding is the significant positive effect of work pressure on levels of work engagement. Prior literature suggests that job demands have detrimental effect on work engagement as they pose obstruction in the working of an individual. However, in the case of teaching in HEIs, our findings suggest that work pressure to a certain level has positive effects on the engagement levels of teachers. Thus, when teachers face deadlines or are given targets, they perform under pressure and show higher levels of vigor, absorption, and dedication (Table 42.5).

42.5 Conclusion

Work engagement is a much-coveted attribute in every organization as it has established relationships with performance, productivity, commitment, etc. It is a positive state of mind which is determined by the job demands, personal resources, and job resources specific to the occupation and industry. In the context of education sector, the changing landscape of HEIs of India is characterized by unique job demands of work pressure, role conflict, and emotional demands as the HEIs now put a lot of stress on teachers to fulfill extra-role duties such as publishing research papers and doing administrative work in addition to their in-role duty of teaching. Similarly,

Table 42.5 Model summary

Model <i>R</i>	<i>R</i> ²	Adjusted square	<i>R</i> std. error of the estimate		
0.765 ^d	0.585	0.577	0.69601		
ANOVA ^a					
Model	Sum of squares	<i>df</i>	Mean square	<i>F</i>	Sig
Regression	137.318	4	34.329	70.865	0.000 ^c
Residual	97.371	201	0.484		
Total	234.689	205			
Coefficients ^a					
Model	Unstandardized coefficients		Standardized coefficients	<i>t</i>	Sig
	<i>B</i>	Std. error	Beta		
Optimism	0.408	0.054	0.401	7.531	0.000
Opportunity for development	0.303	0.057	0.321	5.292	0.000
Work pressure	0.149	0.044	0.161	3.368	0.001
Social support	0.121	0.048	0.136	2.518	0.013

HEIs offer unique job resources of autonomy, social support, and opportunity for development for their teachers who possess resilience and optimism. In this study, we compared job demands, personal resources, job resources, and work engagement across selected demographic variables of age, gender, marital status, and type of family and found significant differences in few. Similarly, we investigated the relationships and effects of HEI-specific job demands, personal resources, job resources, and demographic characteristics of teachers on work engagement. Stepwise regression revealed that optimism (personal resource), opportunity for development and social support (job resources), and work pressure (job demand) significantly and positively affect the levels of work engagement. This is an important study for HEIs as it reveals the factors that have significant effects on work engagement. HEIs can design the work in such a way that there is less role conflict and work pressure. Also, HEIs can ensure opportunity for development and give autonomy to their teachers as these resources have significant positive effects on work engagement.

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Chapter 43

Leader's Positive Humour and Employee Turnover Intention—Role of Employee Engagement and Job Satisfaction as Mediators



Senthilkumaran Piramanayagam and Partho Sea

43.1 Introduction

The employee turnover rate in the hospitality industry is disproportionate compared to other services (Dipietro and Condly 2011; Guchait et al. 2015). The hospitality industry in India has a severe threat of high employee attrition that is of quite a concern for the industry's profitability, stability and growth (Chittiprolu et al. 2021). It is a disturbing fact that the hospitality industry in India presently has a minor pool of labour and an ageing workforce, which may be a deterrent factor for the growth of the hospitality industry (Jauhari and Rishi 2012). Any decline in the growth and performance of the hospitality industry will directly influence the performance of the tourism industry, which currently contributes 9.6 per cent towards India's Gross Domestic Product (GDP). Employee attrition in the hotel industry in India has been consistently as high as 40 per cent for the last 5 years (Sathyanarayanan 2016). Employee turnover is a primary managerial concern at hotels in India. Higher attrition increases the cost burden of an organisation's recruitment, training and development (Jauhari and Rishi 2012). Employee turnover is a cause for loss of financial, intellectual assets and resources, which are also detrimental to organisational profitability and performance (Simons and Hinkin 2001). Phillips and Connell (2004) observed that underestimation of the cost of employee turnover, inadequate identification of causes and the mismatch between the causes and solutions are the common mistakes many organisations make related to employee attrition, leading to their failure in managing attrition.

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Sun and Wang (2017) Strong leadership in the organisation prevents subordinates from leaving the organisation. For several reasons, a leader's behaviour is an antecedent for employee turnover decisions (Chen 2002). Researchers have a consensus that humour could be a significant competency of a leader. Understanding the impact of leader humour in workplace relationships is crucial in managing the human resource (Yang et al. 2017). Mesmer-Magnus et al. (2012) concluded through a meta-analysis that LPH is positively associated with employee job satisfaction (EJS). Studies on LPH show that it has a positive relationship with employee engagement (EE) and increased tenure of employment in the organisation (Goswami et al. 2016; Robert et al. 2016). However, there is no theoretical and empirical examination of the relationship between LPH, employee turnover intention (ETI) and the mediating role of EJS between LPH and EE and ETI. Hence, the objective of this study was to explore the relationship between the LPH, EE and ETI and the mediating role of EJS between these constructs in the hospitality context. The outcome of the research could provide a strong foundation for future research and the implication for managers in the hospitality industry in India.

43.2 Literature Review

Workplace-related issues such as recruitment, training and development, retention and understaffing are recognised as major issues in the hospitality industry across countries (Yang and Cherry 2008; Han 2022). The terms “employee turnover” and “employee attrition” are used interchangeably to denote employees who leave the organisation voluntarily in this research. There are incidences that hotel employees in India quitting in mass to express their discontent without giving an opportunity to rectify it (Bagri et al. 2010). Leader or supervisor-related factors are considered a major antecedent of employee turnover in the hospitality industry (Chang et al. 2020; Han 2022).

The choice of an organisation by an employee is determined by its strong leadership perception (Lord et al. 2001), compensation and possible advancing opportunities, but the intention to persist with an organisational is mostly determined by the employee's relationship with the leader or immediate supervisor (Buckingham and Coffman 1999). A leader, usually an immediate superior, who is in a managerial or supervisory position envisages a vision, establishes directions, aligns people and inspires and overcomes hurdles to realise an organisation's vision (Robbins and Judge 2017). A leader is a person who influences the behaviour and action of subordinates or followers. Leadership is a process, dynamic in nature, where the leader and subordinate have a reciprocal relationship. Humour is fundamental for leader and employee relationships (Cooper 2008). Humour is essential to improve interpersonal relationships in work and non-work life. It also influences the leader-follower relationship quality (Gkorezis et al. 2011).

Martin et al. (2003) narrated four types of humour: *affiliative, aggressive, self-enhancing and self-defeating*. Affiliative humour strengthens the relationship and supports the other, whereas aggressive humour is used to attack or demean others to establish power. Self-enhancing humour helps an individual protect oneself from stress and adopt a humorous mindset. A humour that involves highlighting an individual's own weakness to attain others' acceptance is known as self-defeating humour. Affiliative or positive humour will be an effective tool control for leaders in influencing their subordinate's behaviours, while negative will negate the effects (Mesmer-Magnus et al. 2012; Tarvin 2012). Today's leadership is not about command, but inspiration and getting along. Humour is a lubricant for social interaction (Mao et al. 2017), and a leader's social skills are considered an indicator of a leader's success. Humour is found to be a critical ingredient that facilitates socialisation among people (Nezlek and Derks 2011). Socialisation increases the emotional connection (Robert et al. 2016) between leader and follower, which further indirectly influences the follower's work withdrawal (Mesmer-Magnus et al. 2012).

Peebles et al. (2020) found that positive humour in the workplace contributes to employee performance and positive attitude in their workplace. The LPH with a subordinate would make the relations more personal (Cooper 2008). Positive humour in the workplace impacts EE, bringing in energy and enthusiasm among employees (Konovsky and Pugh 1994; Schaufeli and Bakker 2004). The LPH is also related to employee work attitude and EJS (Burford 1987). There are a few empirical evidence supporting the linear relationship between LPH and EJS (Cooper 2008; Hughes and Avey 2009; Mesmer-Magnus et al. 2012).

There is much empirical evidence on the negative relationship of EJS on ETI in various services industries (Thomas et al. 2017; Zito et al. 2018). EJS leads to a positive state of emotion on one's job. EJS is a measure that reflects employees' like and dislikes of the job. EJS plays an essential role in explaining employee absenteeism, turnover intention, qualitative and quantitative performance and organisational citizenship behaviour (Thomas et al. 2017). Job satisfaction may be an alternative measure for employee's perceived quality of work life, leading employees to stay in or leave the job. In a sense, when the job satisfaction of individuals in the organisation is high, it reduces voluntary turnover intentions (Chourasia 2022; Han 2022).

Goswami et al. (2016) narrated that leader humour is a relatively permanent trait and posit that leader's humour increases follower's work engagement by creating positive emotions in subordinate. In the past literature, there is empirical evidence on the positive link between leaders' humour and employee work engagement (Schaufeli and Bakker 2004; Saks 2006). Goel and Dolan (2007) state that leader humour positively affects followers through a social contagion process. They explain that humour activates dopaminergic rewards in the brain, consequently generating positive emotion. Sibiya et al. (2014) observed that EE has a negative impact on ETI. Kahn (1990) defined EE as "*the harnessing of organisation members selves to their*

work roles; in engagement, people employ and express themselves physically, cognitively, emotionally during role performance". Salanova et al. (2003) and Schaufeli and Bakker (2004) observed that job satisfaction, low employee turnover and high employee organisational commitment are the consequences of high EE.

It is observed in many of the previous studies that job satisfaction acts as a proximal mediator that predicts employee turnover intention. Job satisfaction plays the role of mediator between job training satisfaction and turnover intention (Huang and Su 2016), organisational justice and employee job-related outcomes (Mashi 2018) and organisational climate and organisational commitment (Ariyani 2015). However, a few researchers have found that the relationship between employee job satisfaction and turnover intention is mediated by various other constructs, such as job embeddedness (Dechawatanapaisal 2018), job performance (Lance 1988) and continuance commitment (Fayyazi and Aslani 2015). The role of EJS as a mediator between LPH and ETI and the relationship between EE and ETI has not examined and empirically studied in the past, particularly in the hospitality context. Hence, we proposed the following hypotheses:

Hypotheses 1: LPH is negatively related to ETI.

Hypothesis 2: The relationship between LPH and the ETI is mediated by EE.

Hypothesis 3: The relationship between LPH and the ETI is mediated by EJS.

Hypothesis 4: The relationship between LPH and the ETI is sequentially mediated by EE and EJS.

43.3 Methodology

43.3.1 Sample and Procedure

The participants were full-time employees working in four- and five-star hotels in Kolkata, India. Both four- and five-star hotels were listed in FHRAI Hotels and Restaurant Guide India, 2017. There are three four-star hotels and ten five-star hotels in Kolkata. All the hotels were approached to collect data from their employees. Only two four-star hotels and three five-star hotels gave consent to collect the data. Human resource managers of these hotels were approached for the survey, and employees' initial consent was obtained through the personnel department on the willingness of the employees to volunteer for the survey. The employees who volunteered for the survey were sent questionnaires through the mail using Google Forms. The employee data was analysed with a structural equation model (SEM). The mediation of EE and EJS is analysed using PROCESSMACRO, developed by Hayes (2013). All the items used to measure the study constructs were averaged to form new ones.

In four-star hotels, 85 employees of 232 employees, and in five-star hotels, 211 employees of 512 employees participated in the survey. Only 272 responses were used, and 24 were removed from the data set as these volunteers did not complete the survey. The majority of the respondents were male (81 per cent), the average age was 28.64, which ranged between 20 to 41 years and had a tenure in the organisation of 2.3 years.

43.3.2 Measures

Leader Humour (LH): It was measured with the Positive Humour Supervisor Scale developed by (Decker and Rotondo 2001) with five items. Items are measured on a scale of seven-point ranging from 1 (strongly disagree) to 7 (strongly agree) with statements like “my supervisor communicates with humour”. The construct reliability of the leader humour is 0.95, and the average variance extracted (AVE) is 0.839.

Job Satisfaction (JS): This construct is measured with the scale developed by (Cammaan et al. 1975). It has three items to measure job satisfaction. Items are measured with a ten-point Likert scale varying between 1 strongly disagree to 10 strongly agree. The AVE of the construct is 0.897, and the composite reliability is 0.96.

Employee Engagement (EE): The scale used for measuring (EE) was established by Shuck et al. (2016), which has three sub-factors (cognitive, behavioural and emotional engagement). EE is proven to its superiority in terms of reliability and discriminant, incremental and nomological validity compared to other EE scales. The scale is composed of four items in each sub-factor measured on a nine-point scale, where one represents strongly disagree, and nine represents strongly agree with the statements like “I am really focused when I am working”. The composite reliability score of the scale is 0.96, and the average variance extracted is 0.98.

Turnover Intention (TI): A scale developed to measure turnover intention by Landau and Hammer (1986) is used to measure the employee turnover intention among the respondents. The scale includes the statement, “I am seriously thinking about quitting my job”. All four statements in the scale were measured on a seven-point Likert scale, where one denotes strongly disagree, and seven denotes strongly agree. The composite reliability and the average variance explained values of 0.95 and 0.83, respectively.

Control Variables: The researcher has controlled for gender, experience, age, and tenure in the analysis based on the past literature on the moderating role of gender (Dechawatanapaisal 2018), age (Mashi 2018), experience (Martin et al. 2003) and tenure (Schaufeli and Bakker 2004).

43.4 Result

The result of descriptive analysis, inter-correlation and Cronbach’s α of reliability is presented in Table 43.1.

The internal consistency of each construct was tested with Cronbach’s alpha. The Cronbach’s alpha (α) value ranged between “0.90 and 0.94” which indicates good internal consistency. The issue of multicollinearity between constructs was measured with Pearson product movement correlation. The bivariate correlation “ r ” value is < 0.81 between constructs, indicating no potential multicollinearity issue. The model fit of the conceptual model was measured with SEM. The scale’s construct validity has been assessed using confirmatory factor analysis (CFA). The structural and measurement model was significant and fit. A confirmatory factor analysis (CFA) was conducted with several models varying from one to four factors (Table 43.2) to understand the unidimensionality of the constructs. The result of the CFA shows that the goodness of fit indices with the four-factor model was better than other models and proves the claim of the unidimensionality of the constructs measured in the study.

A test of common method bias (CMB) was adopted as the data is cross-sectional data, mostly self-reported, and collected at a single point in time. The CMB was tested by loading the items in the constructs on their latent construct and loading all the items in the new common method latent variable. The result showed convergence in the five-factor model (Podsakoff et al. 2003).

Table 43.1 Descriptive, inter-correlation and reliability statistics of study variables

Variables	Mean	SD	α	Skewness	Kurtosis	1	2	3	4
1. LPH	4.50	0.96	0.982	- 1.27	1.80	1			
2. EE	7.38	1.77	0.967	1.058	1.08	0.67*	1		
3. EJS	8.15	1.58	0.963	0.57	0.15	0.53*	0.71*	1	
4. ETI	2.24	1.38	0.952	1.31	1.49	- 0.62*	- 0.81*	- 0.63*	1

SD: standard deviation; α : Cronbach’s alpha. *Significant at 1 per cent

Table 43.2 Fit indices of alternative measurement models

Variables	DF	χ^2	χ^2/Df	CFI	GFI	RMSEA
1. Single factor	90	2020	22.44	0.644	0.451	0.281
2. Two factor	89	1681	18.996	0.706	0.465	0.257
3. Three factor	87	841.8	9.676	0.861	0.724	0.179
4. Four factor	82	173.21	2.112	0.927	0.983	0.064

Note $N = 272$. CFI = Comparative fit index, GFI = Goodness of fitness index, RMSEA = Root mean square error of approximation, confidence interval at 95%

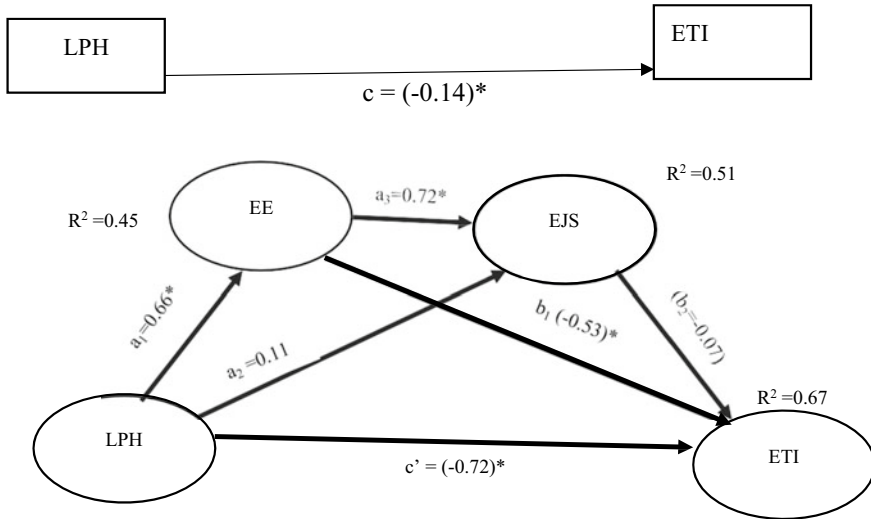


Fig. 43.1 Mediation model $H_1 = LPH \rightarrow ETI$, $H_2 = LPH \rightarrow EE \rightarrow ETI$, $H_3 = LPH \rightarrow EJS \rightarrow ETI$, $H_4 = LPH \rightarrow EE \rightarrow EJS \rightarrow ETI$

Through structural model analysis, all the path coefficient was estimated. Gender, education, age, and tenure were used as control variables. The resulting path coefficient and the R^2 values are presented in Figure 43.1.

The approach recommended by Preacher and Hayes (2004) has been used to analyse the mediation effect, where it directly analyses the indirect effect between independent and dependent variables using mediating variables through a bootstrapping procedure. The result of the mediation test is presented in Table 43.3. The result reveals that LPH has negative relation with ETI, as predicted in Hypothesis 1. EE mediates the relationship between LPH and ETI, as stated in Hypothesis 2. The finding also supports the assumption stated in Hypothesis 3 that EJS mediates the relationship between LPH and ETI. The result does not support the assumption of Hypothesis 4 that EE and EJS sequentially mediate the relationship between LPH and the ETI.

43.5 Discussion and Conclusion

The objective of this study is to test the significance of LPH in increasing EE and reducing ETI, a perennial issue in the hotel industry in India. Similarly, EE has been of interest to various human resource practitioners and its role in LPH, ETI, and EJS. However, this has not yet been empirically verified. Hence, this study aimed to test a model of the antecedents of leader humour on turnover intention mediated by EE and EJS. The results of the study revealed that LPH has a statistically significant positive

Table 43.3 Path coefficients and indirect effects for mediation models

	Path coefficients			Indirect effect		
	To ETI	To EE	To EHS	Estimate	95% confidence interval	Bias-corrected bootstrap CI
LPH	- 0.14 (0.05)	0.66 (0.04)	0.11 (0.06)			
EE	- 0.53 (0.06)		0.72 (0.06)			
EJS	- 0.07 (0.05)					
Total				- 0.57 (0.07)	- 0.73, - 0.43	- 0.60, - 0.40
LPH → EE → TI				- 0.52 (0.08)	- 0.70, - 0.36	- 0.57, - 0.34
LPH → JS → TI				- 0.49 (0.09)	- 0.69, - 0.31	- 0.57, - 0.27
LPH → EE → JS → TI				0.02 (0.02)	- 0.01, 0.08	- 0.03, 0.07

N = 272. The total effect (LPH → ETI) = -0.72 (0.05), Standard error in parenthesis

impact on employee job satisfaction. The results indicate that the employees liked leaders who used positive humour and had more respect for them. The study findings also indicate a positive relationship between leader humour, EE, and job satisfaction. The findings are consistent with those of previous studies on the positive relationship between LPH and EE (Schaufeli and Bakker 2004; Saks 2006; Goswami et al. 2016).

The use of positive humour also helps employees reduce stress and tension, enhance team cohesion and reduce stressful interactions between colleagues, and the supervisor aligns with the observation (Mesmer-Magnus et al. 2012; Peebles et al. 2020) that LPH positively influences EJS and should not be discouraged in an organisation. The finding that LPH acts as an antecedent for reduced turnover intention aligns with the findings of Salanova et al. (2003). EE has also been found to have a significant negative effect on turnover intention, as has been observed in previous studies Wen et al. (2022). EE has a positive relationship with EJS, which states that engaged employees have higher job satisfaction. EJS and EE negatively impact ETI, as higher engagement and job satisfaction resulting in lower turnover intention.

The results also suggest that EE was a better predictor of ETI than EJS. These findings of the study contradict the previous research findings that job satisfaction was a proximal predictor of ETI (Huang and Su 2016; Thomas et al. 2017); the result of the current study in hospitality industry shows that EE is a proximal predictor of ETI. It is found that EE and EJS act as independent mediators in the relationship of LPH and ETI and have no support for the sequential mediation of EE and EJS in the relationship between LPH and ETI.

43.5.1 Conclusion

For over a decade, high employee turnover has been a persistent human resource management issue that directly or indirectly influences the performance of hospitality organisations in India. Under the circumstances, the current study provides significant insight into the relationship between LPH and ETI. LPH acts as a key element that evokes positive emotion; in turn, the positive emotion increases EE. Hospitality organisations no longer depend upon job satisfaction to predict employee turnover; instead, the managers have to consider EE as a proximal predictor of employee turnover. The study also emphasises that LPH significantly reduces employee turnover and improves EE and EJS. Organisations should inculcate humour and encourage the same between the leaders and employees. Hospitality organisations will be benefitted from EE through the use of LPH. The positive humour by superiors will influence employees of an organisation to be highly engaged and satisfied. This will result in a possible reduction of voluntary employee turnover in hotels. Hotels have to create a fun-filled and pleasurable workplace with a higher EE to reduce employee turnover.

43.5.2 Limitations and Future Research

Despite its novelty and contribution to the existing body of knowledge on leader humour, it has a few limitations. Although the study participants were confidential to the researchers, the entire study was not anonymous for the management as the human resource managers were aware of their participation in the study, thus leading to possible biases from the respondents. The second limitation is that as it has been conducted in a few hotels in Kolkata, the research results may not be generalisable to the entire hospitality industry. The data was obtained from high-end star category hotels (two four-star and three five-star hotels) in a metropolitan city. The same may not be generalisable to all category hotels and the country's entire hospitality industry. Though it has been a study with culture-specific samples, this study could be a beginning for understanding the role of leadership humour in EE and the turnover intention of the employees. Despite these limitations, the contribution of the study outweighs it.

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Chapter 44

Influence of Job Anxiety Among the Blue-Collar Technical Workforce of Indian Manufacturing Industries: A Post-COVID Perspective



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44.1 Introduction

Anxiety is not immediately fatal to organizational growth and development. Despite the innovation in the work climate, job-related anxiety is gaining pace (Newman et al. 2020). As per WHO's study, the global economy incurs a loss in productivity of US\$1 trillion every year due to depression or induced anxiety. The damage is prominent for blue-collar workers, especially in the manufacturing sector. It is further worrisome for female blue-collar workers. Their emotions constantly hover around the upcoming workday, even when they are physically not at work (Michel et al. 2016). The expectation of a threatening workday activates daunting emotions resulting in fear, anxiety, and impaired well-being. In contrast, if the expectation of the same workday can stimulate positive emotions will establish excitement and promote well-being (Lazarus and Folkman 1984).

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The ongoing COVID-19 pandemic has created over 1.3 million blue-collar jobs in India (Kurup 2021). As per the Better Place Blue-Collar Report by Sharma (2021), 7 million blue-collar jobs are likely to be created in recent days. Of the 500 million Indian blue-collar workers, almost 60% work in non-farm sectors such as construction, manufacturing, retail, commerce, and logistics (Thomas and Khokhar 2022). Understanding the plight of this particular labour segment is a painful experience and is vital for the following six reasons:

First, blue-collar employees are the base of manufacturing companies owing to the competitive advantage of the firm and of the economy (Thomas and Khokhar 2022; White 2021). *Second*, greater output with a decline in manufacturing sector employment is the new counterproductive normal (Rose 2018). *Third*, positive human resource implications for reducing anxiety are plagued in the manufacturing sector (Agarwal 2021; Ahn et al. 2020). *Fourth*, previous research suggests reasons and solutions for job anxiety among white-collar workers (Wilkie 2019), side-lining the concerns of blue-collar workers. *Fifth*, despite constituting around 70% of the workforce, blue-collar workers are the least researched in job anxiety (Agarwal 2021). *Sixth*, through the turbulent period of the COVID-19 context, blue-collar workers did not have the luxury of remote working, and many have lost their employment, enduring additional anxiety associated with contamination from the virus, spreading the disease among family members, and meeting the basic needs of their families. Despite a promising forecast, the reality is gloomy. Fear of job loss and unpaid compensation is the tip of the iceberg. At the core, Indian blue-collar employees are experiencing shocking levels of job anxiety out of fear of contamination and death by the COVID-19 virus. Currently, they are also suffering the silent impacts of the long COVID. The above concerns make the research pertinent and urgent.

Previous literature has already demonstrated that in developing countries, blue-collar workers are observed to be prone towards high levels of turnover intentions (Santhanam and Srinivas 2020). The low research attention is worrisome as very few studies are catering to investigating job anxiety as a precursor to such intentions concerning blue-collar workers (Agarwal 2021). Owing to the research gaps, the current study focuses on job anxiety experienced by blue-collar workers and its impacts on the organization.

In resonance with transactional process (TP) theory (Lazarus and Folkman 1984), we state that anxiety or stress involves a transaction between an individual and their perceived external environment. Individuals' interpretation of stressors and coping ability determine their response to a situation. A wide range of job-related outcomes, diminished job satisfaction, and lower levels of job commitment are the prominent causatives of job anxiety (Ćulibrk et al. 2018; Schmalbach et al. 2020b). Job anxiety may be associated with a cost to the company, health insurance, pension fund, and, most importantly, a low social impact factor. As per TP theory (Lazarus and Folkman 1984), the same stressor may receive a different appraisal from different individuals, resulting in different stress responses. The appraisal of a transaction is the unique encountering tactic of an individual, which may greatly vary from person to person. Typical job anxiety symptoms heavily influence physical health, mental stability, and

work performance. Yet, the irony is that we do not have an International Classification of Diseases (ICD) code to cater the workplace phobia (Schmalbach et al. 2020a, b).

Technology has eased life, increased expectations, and made tracking the result a complex affair. The expectation of organizational citizenship behaviour has made the workers mask their natural feelings of uneasiness, and fear, especially among the blue-collar workers. The outline of TP theory (Lazarus and Folkman 1984) hence tells us that the appraisal has crossed the primary stage of judging the significance of the situation and has entered into a secondary appraisal state. The power equation of trade unions could not solve finding the results of job satisfaction variables (Wilkie 2019). Blue-collar workers, the base of any company, are seen as indispensable yet insignificant, resulting in the initiation of blue-collar drought (Wilkie 2019). The increasing severity of this draught demands prompt redressal. Our theoretical framework shows that the situational appraisal has reached the third stage of additional secondary appraisal (the first being harm/loss and the second threat), demanding an assessment of potential growth from the situation. The movement for a changed mindset towards blue-collar workers is the need of the hour (Kumari 2021). It will reverse the drought scenario to a phase of abundance, highly valued and dearly nurtured. An individual's perceived ability decides the rigour of their coping. Hence, if perceived job-related anxiety is high, it may have a detrimental effect on work-related outcomes such as performance (Kim et al. 2021), job satisfaction (Cheung et al. 2022) and turnover intention (Labrague and de los Santos 2021). Therefore, HR practitioners must adequately capture job anxiety perceptions to design appropriate coping interventions.

In the Indian context, an exclusive psychometric scale is lacking to measure the construct. Existing measures were developed almost four decades ago and are no longer relevant for the current Indian context, which has seen massive social changes in terms of globalization, a rise in the youth population and a new generational workforce (Clearias 2022). The post-COVID world has created a significant shift in the way traditional businesses used to operate, and it has also impacted our perspective towards daily activities. Already during the first wave (April–September 2020) and the second wave (April–September 2021) of the COVID-19 pandemic in India, blue-collar workers have had to suffer the most (PTI 2021). The early part of the first wave witnessed 100–120 million blue-collar workers going without pay (Kar and Shrivastava 2021). By the time the restrictions were eased, and these workers could return to their jobs, the mortality rate peaked at its highest during the second pandemic wave. The nature of blue-collar work involves physical and manual labour and involves touching and scraping surfaces, which several others have used. Hence, the anxiety of getting infected with the virus loomed large for blue-collar workers. In addition, they worry that they might carry the virus from work to home. For many such workers, the post-COVID times have been filled with stress and uncertainty. This calls for a relook at the construct of job anxiety and its measurement in the mentioned context.

44.1.1 Surveys to Capture Job Anxiety

Looking at the increasing concern resulting from job anxiety, the drive to conduct surveys to measure its intensity began. Initially, work anxiety was seen as a phobia, as it showed an employee's incapacity to go to the workplace due to anxiety and the reduction or vanishing of anxiety soon after leaving the workplace (Haines et al. 2002). Warr's anxiety-contentment model too measured job anxiety (Bryson et al. 2013), strengthening prior claims with its results and analysis. Specific occupational groups reported anxiety at work. Still, the availability of differentiated treatment for specific work-related anxieties was missing. Not until recently, a wide job anxiety scale was developed (Linden et al. 2008). It gave comprehensive coverage by catering to five crucial dimensions: (i) stimulus-related anxiety and avoidance behaviour, (ii) social anxiety, (iii) health anxiety, (iv) cognitions of insufficiency, and (v) job-related worries. It is further ramified into 14 subcategories and 70 questions (Linden et al. 2008). There was sparse research examining the psychometric properties of job anxiety among blue-collar workers. In contrast, the original job anxiety scale was examined among patients in psychosomatic rehabilitation hospitals to differentiate different kinds of work-related anxiety (Linden et al. 2008). This study attempts to add validation evidence for this scale in the Indian context.

44.2 Current Study: Conceptualization and Review of Literature

The blue-collar workforce is closely linked to skilled and unskilled manufacturing, technical installation, construction, and other physical jobs, primarily manual (Wilkie 2019). Organizational commitment and job satisfaction go hand in hand (Čulibrk et al. 2018; Kim et al. 2021; Schmalbach et al. 2020a). Happier the employees in their job, the more chances of them being committed towards their organization (Santhanam and Srinivas 2020). On the contrary, low job satisfaction creates anxiety and converts a positively engaged work exposure into a dreadful experience (Stanley 2019). Success and overall development of the organization can be achieved only by satisfaction-driven employee commitment (Ahmed and Baskaran 2020). To make the employee continue working in the organization, management needs to be proactive in offering growth and effectiveness (Mosadeghard 2008). The theoretical claim of TP theory gives employees the reappraise of their situation, taking into account the coping resources. Economic downturns are more likely to wash away the blue-collar workforce as they are less trained and relatively rigid due to restricted work knowledge (Groschen and Williams 1992).

Recently, a conflicting trend has been observed where alternative employment arrangements touched new heights, making the blue-collar workforce easily penetrable to related industries (Katz and Krueger 2019). The change welcomed a new set of stressors to the workplace. The anxiety towards and due to a job is growing,

making it highly essential to be understood to realize organizational benefits. We can also visualize it as a constant change in cognitive and behavioural efforts to manage specific internal or external stressors that may be appraised as taxing or exceeding a person's resources. Given this, we must measure this variable most appropriately. Our study intended to validate the job anxiety scale developed by Linden et al. (2008) among the blue-collar workforce employed in Indian manufacturing industries. This investigation should help popularize this scale's adoption among Indian HR practitioners.

44.3 Method

44.3.1 *Sample and Data Collection*

Thousand seven hundred employees/workmen employed in six public and private manufacturing industries in Odisha, India, participated in the present study. Considering the empirical standpoint of the study, the state of Odisha offered a generalizable feature to that of any labour-intensive developing country as per the "Aatmanirbhar Skilled Employee Employer Mapping" (ASEEM) initiative by the Ministry of Skill Development and Entrepreneurship, Government of India. On the ground of diversity, organizations were chosen both from the suburban and urban localities of the state, keeping in mind the new economic break-up of any workplace. We have reserved our analysis to workmen/employees posted exclusively in blue-collar jobs, precisely justifying the target population criteria.

The researchers visited the organizations personally to carry out paper and pencil surveys during March–July 2021. 1128 responses were returned by the sample respondents, resulting in a 66.35 per cent response rate. Of these, 185 survey sheets were rejected because of acute incompleteness. The final sample consisted of full-time blue-collar employees ($n = 943$) in the age range of 22–27 years employed in the manufacturing sector in India. The demographic details of the sample are presented in Table 44.1.

44.3.2 *Measures*

The job anxiety scale originally established by Linden et al. (2008) consists of 14 subscales with 70 Likert-type scale items. They validated five dimensions: stimulus-related anxiety and avoidance behaviour; social anxiety and impairment cognitions; health and body-related anxiety; cognitions of insufficiency; and generalized work-related worrying. Table 44.2 details dimension-wise items. The ratings instructed

Table 44.1 Demographic details ($n = 943$)

Gender	<i>Male</i>	<i>Female</i>		
	72%	28%		
Age group	< 25 years	26–35 years	35–50 years	> 50 years
	39%	23%	17%	21%
Experience	≤ 5 years	> 5 years		
	34%	66%		
Education	<i>Diploma Engineering</i>	<i>B.Tech/B.E</i>	<i>ITI/NCVT</i>	
	58%	13%	29%	

*B. Tech = Bachelor in Technology; B.E = Bachelor in Engineering; ITI = Industrial Training Institutes; NCVT = National Council of Vocational Training

in the original job anxiety scale ranged from 0 (do not agree at all) to 4 (totally agree); however, we used a 5-point rating scale ranging from 1 (strongly disagree) to 5 (strongly agree).

For examining the criterion validity of the job anxiety scale, two criterion measures linked to job anxiety were considered: job burnout and workplace ostracism. The first measure (job burnout) derived from Maslach et al. (1996) originally consisted of 22 items under three subscales, from which we have encompassed two subscales for our study-emotional exhaustion (e.g. “I feel used up at the end of the day”) and depersonalization (e.g. “I have become more callous towards people since I took this job”). The second measure assessed the painful and aversive experience one experiences on the job, and it was adapted from the 10-item workplace ostracism scale (Ferris et al. 2008). A sample item of the scale: “Others at work shut me out of the conversation”. The reliability (Cronbach’s α) for the job burnout scale was 0.82, and the same was 0.88 for the workplace ostracism scale in our aggregate sample ($n = 943$).

44.3.3 Approach for Data Analysis

Two subsamples were created by randomly splitting the aggregate sample for carrying out exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) separately (Henson and Roberts 2006; Matsunaga 2010). We differentiated the employees engaged in direct technical work (such as welding, gas cutting, riveting, and lathe machine operators) and those engaged in other types of blue-collar work (cleaning, waste disposal, labour-intensive work). We considered the people employed in technical work as sample 1 ($n_1 = 534$) and those working in other areas as sample 2 ($n_2 = 409$). With the first set of 534 participants, an EFA was conducted. The reason for EFA is bifolded despite taking an established scale. *Firstly*, the scale of Linden et al. (2008) was tested in workplaces multiple times (Muschalla et al. 2010; Muschalla

Table 44.2 Dimension, subscale, and item details of job anxiety scale

Dimension	Subscale	Item no. and item
Stimulus-related anxiety and avoidance behaviour	Anticipatory anxieties with feelings of strain when being at the workplace or in anticipation of situations or events at the workplace	(2) When thinking about my workplace, everything in my body is tense
		(5) When imagining having to pass a complete working day at this workplace, I get feelings of panic
		(6) In special situations at the workplace, I am afraid of getting symptoms like trembling, blushing, sweating, and racing heart
		(19) My sleep is worse before working days in contrast to non-working-days
		(48) While working, I am always paying attention what could happen next
	Phobic avoidance of work situations	(22) I feel tense when entering public places (like the supermarket of my town) where I could meet colleagues or superiors
		(23) Whenever possible, I avoid coming near to the site of my workplace
		(10) I rather take a roundabout way instead of passing the street where my workplace is situated
		(28) I had to go on sick leave once or for several times because I could not stand any longer the problems at my workplace
		(30) On my way to my workplace, I would rather turn and walk back
(33) After work, I hurry up more than others just to get away from that place		
Conditioned or post-traumatic anxiety	(65) It is only since a stressful event that I have this feeling of tension and uncomfortability at the workplace	

(continued)

Table 44.2 (continued)

Dimension	Subscale	Item no. and item
		(36) Special situations at work remind me of bad situations in the past and make me nervous
		(41) I have once experienced a terrible event at the workplace which is still present in my mind and makes me feel frightened at work
		(9) I often see pictures and memories in my mind's eye which remind me of bad experiences that happened at the workplace
	Global feelings of anxiety towards the workplace	(63) I feel severely uncomfortable and tense when I am at my workplace
		(64) I feel severely uncomfortable and tense when I think of my workplace
	Social anxieties	Fears of exploitation
		(40) My superior exploits me
		(15) At my work, everything always ends remaining at me
		(27) My colleagues are looking after themselves and the work remains with me
		(24) In my work, one does not get the proper salary for the achievements that one has to do
Ideas of persecution and mobbing		(49) At this workplace, they make me stand outside
		(51) My superior is harassing me
		(52) My colleagues are harassing me
		(54) At my workplace, I am in the mercy of persons' arbitrary behaviours and unfairness

(continued)

Table 44.2 (continued)

Dimension	Subscale	Item no. and item
	Interactional anxiety, i.e. fears whenever confronted with colleagues or superiors	<p>(56) At my workplace, they intentionally made awful working circumstances for me</p> <hr/> <p>(25) When I see special colleagues or superiors only from far away at work, I try not to meet them directly</p> <hr/> <p>(26) When I see special colleagues or superiors only from far away outside my workplace, I try not to meet them directly</p> <hr/> <p>(42) When I have to speak with colleagues or superiors, I am afraid of getting symptoms Like, e.g. trembling, sweating, racing heart, blushing</p> <hr/> <p>(44) I feel unsure when I have to work together with special persons</p> <hr/> <p>(46) I panic when I am ordered to come to my superior</p> <hr/> <p>(47) I feel unsure when somebody observes me while I am working</p> <hr/> <p>(31) At the workplace, I have got problems with my clients from other departments</p> <hr/> <p>(62) At the workplace, I have got problems with one or more colleagues</p> <hr/> <p>(38) I have got problems with one or more superiors</p>
Health-related anxieties	Hypochondriac anxieties and the idea that working conditions endanger health	<p>(21) The need to touch surfaces at my work ruins my state of health</p> <hr/> <p>(29) If I stay any longer at this workplace, this will cause harm to my health</p>

(continued)

Table 44.2 (continued)

Dimension	Subscale	Item no. and item
		(66) With my acute health problems, I normally should not be able to commute daily at this workplace
		(1) The circumstances at my workplace make me sick (no sanitization, no vaccination)
		(50) The stress at my workplace is causing ill health
	Experience of panic or other somatic symptoms while being at work	(7) I have experienced that in special situations at my workplace, I get symptoms like trembling, blushing, sweating, racing heart
		(32) The nearer I come to my workplace, the more I get symptoms, like trembling, sweating, heatwaves or racing heart
		(34) In special situations at work, I regularly panic
	Functional impairment, i.e. the fear that one's own ill health impairs work performance	(58) I have health-related impairments which reduce my capacities in working achievement ara>
		(3) My state of health causes problems for me in my working day
	Cognitions of insufficiency	General feeling of insufficiency the feeling of insufficient qualification, overload, or lack in knowledge
(12) My working circumstances are negative stress for me		
(18) The conditions under which I work make me nervous		
(17) I have the feeling that my knowledge is not sufficient for the work I am carrying out		
(43) I do many mistakes at work, or I am too slow		

(continued)

Table 44.2 (continued)

Dimension	Subscale	Item no. and item
		(59) I am not enough qualified for new tasks at work
	(37) I have the idea my impairments cause deficits in my working achievements	
	(8) I have miserable feelings at my workplace which restrict my capacity for achievement	
	(60) I fear that colleagues could judge me negatively because of my health impairments	
	Fear of change or feelings of insecurity because of impending changes at the workplace	(16) I do not know how to react when I am confronted with new tasks at work
	(4) I suffer from the fact that I never know what comes up next at my workplace	
	(13) I suffer because I cannot feel sure that everything will not be changed at work	
	(45) I am suffering from the fact that I am always left in unclearness what will come up to me at work	
	(55) I have the idea that I can no longer get along with changes at my workplace	
	Work-related worries	Generalized worrying about minor matters concerning the workplace
(14) Colleagues and family have already told me that I should not always worry that much about work		
(20) Even in my free time, I continue thinking about work		
(57) My thoughts about work problems hinder me to carry out other all-day activities		

(continued)

Table 44.2 (continued)

Dimension	Subscale	Item no. and item
		(68) I am suffering from the worries which I cannot put away or stop
	Worries about job security and the future	(61) I believe it is realistic that nowadays one is easily fired because of times of absence
		(35) I believe that—no matter how engaged one is working—the workplace is always endangered
		(69) Being out of work means for me losing all my image and reputation
		(70) A loss of my workplace is/would be existentially threatening
		(53) If one becomes unemployed nowadays, one will never find a job again

and Linden 2017) with a small set of population at geographically different locations. However, it was sparsely done to find the job anxiety of a vulnerable mass of blue-collar workers. *Secondly*, we wanted to test the efficacy of the instrument in India, a labour-intensive country. It is suggested by researchers (Henson and Roberts 2006; Matsunaga 2010) to use EFA when there is a possibility to generate a new understanding or theory from an existing one.

For extracting the factors and establishing correlations among the scale dimensions, we used both the oblique rotation method (goemin) and the maximum likelihood method (MLM). Items having 0.40 or more factor loading values were deemed to load as one factor (Ferguson and Cox 1993). The recommendations of Ferguson and Cox (1993) were followed to handle the cross-loadings among items. The item difference > 0.20 was allowed to get loaded on the factors that got the highest loadings, while the item loading difference with < 0.20 was removed. All the five predetermined dimensions identified by Linden et al. (2008) got to be consistent in our exploratory factor extraction exercise.

The second sample ($n2 = 409$) was used to conduct confirmatory factor analysis. The descriptive analysis was carried out using Stata 17.0, and the factor analysis was done through Mplus version 8.6. Consistent with exploratory factor analysis, we have also used the maximum likelihood method (MLM) as an estimation method. Given the sensitivity of Chi-square (χ^2) value in large samples, the fit indices such as comparative fit index (CFI), root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR) were considered along with

the χ^2 value for the overall model (Kline 2010). Brown (2006) suggested using the average variance extracted (AVE) and composite reliability (CR) to understand and adjust the measurement errors rather than adopting the traditional correlational approach. Hence, for testing construct validity (both convergent and discriminant validity), we computed both AVE and CR using the steps recommended by Fornell and Larcker (1981). We correlated the five dimensions of the job anxiety scale, job burnout scale, and negative work productivity for criterion validity.

44.4 Results

44.4.1 Exploratory Factor Analysis Findings

The factor structure of the 70-item job anxiety scale was examined using the Kaiser–Meyer–Olkin (KMO) test and Bartlett’s test of sphericity. The sampling adequacy mean value of KMO in the present study was 0.83, which was above the recommended threshold of 0.60 (Cerny and Kaiser 1977). The items were found to be significantly intercorrelated in Bartlett’s test of sphericity: $\chi^2 (592) = 2886.31, p < 0.001$.

The Model 1 of exploratory factor analysis (EFA) comprised all 70 items of the original job anxiety scale. In our criteria of the factor loading, the EFA model was respecified on the ground of (a) items with loading weights of < 0.40 on all factors together, (b) cross-loading on two or more factors with loading weight variance ≤ 0.20 , were eliminated (item no. 5,13,15,28,29,44, and 65), and we re-ran the analysis as Model 2 and Model 3 (removing item no. 11,23,36,41,52 and 70). (c) Model 3 evolved with the reduction of one subscale (conditioned or post-traumatic anxiety having items no. 9,36,41 and 65) as the items got loading values with < 0.40 . (d) We have followed the advice of Costello and Osborne (2005) to eliminate factors having less than three indicators as they are uneven and poorly measured. Hence, Model 4 (the final model) witnessed the elimination of two more subscales as there were only two items loaded in them. The subscales were the experience of panic or other somatic symptoms at work (items 32 and 34) and functional impairment, i.e. the fear that one’s own ill health impairs work performance (items 3 and 58). In the final model, the job anxiety scale got retained, with the original five dimensions having 53 items.

The factor structure having loading values and eigenvalues and communality in each item of the scale is presented in Table 44.3. The original five dimensions (stimulus-related anxiety and avoidance behaviour; social anxiety and impairment cognitions; health and body-related anxiety; cognitions of insufficiency; generalized work-related worrying) created by Linden et al. (2008) matched the extracted factors in our sample data. The communality of all the retained items was more than 0.90 except item 16 (falling in the subscale: Fear of change or feelings of insecurity

because of impending changes at the workplace having a communality of 0.72), while the primary loading values of each remaining item were ranging from 0.40 to 0.89 with eigenvalue in the range of 1.32 to 6.63.

The remaining items got model fit ($\chi^2(166) = 184.86, p = 0.12, GFI = 0.97, TLI = 0.96, RMSEA = 0.03, SRMR = 0.03$). Except for the correlation between the dimensions of social anxiety and work-related worries rest, all bivariate factor correlations were significant at a 95% significance level, supporting oblique rotations.

44.4.2 *Confirmatory Factor Analysis Findings*

The factor structure acknowledged in EFA was examined through confirmatory factor analysis (CFA) using the second set of samples ($n_2 = 409$). Before conducting CFA, a multivariate normality test was conducted to understand the skewness and kurtosis values using the Henze-Zirkler test (Henze and Zirkler 1990). The skewness and kurtosis values were significant: Henze-Zirkler = 137.48, $p \leq 0.001$). Hence, for dealing with non-normality, the estimation method of the maximum likelihood method (MLM) was used.

The first CFA model with 53 items and five dimensions of the job anxiety scale that was acknowledged earlier in the EFA model generated “moderate fit”: $\chi^2(213) = 378.36, p < 0.01, GFI = 0.91, TLI = 0.89, RMSEA = 0.05, SRMR = 0.06$. For estimating the error covariance in the first CFA model and raising model fitment, we adopted the suggestion made by Brown (2006). As a result, the second CFA model (revised) got to be slightly restored: $\chi^2(192) = 237.21, p < 0.01, GFI = 0.94, TLI = 0.92, RMSEA = 0.05, SRMR = 0.05$. The revised model has 53 items loaded on their respective dimensions.

44.4.3 *Reliability and Validity Findings*

The descriptive statistics and Cronbach (α) reliability values of five dimensions of the job anxiety scale identified in both EFA and CFA are presented in Table 44.4. The second set of sample respondents ($n_2 = 409$) were contented with stimulus-related anxiety behaviour ($M = 3.36$), trailed by social anxiety ($M = 3.29$), work-related worries ($M = 3.19$), health-related anxieties ($M = 2.66$), and cognitions of insufficiency ($M = 2.42$). The dimension cognition of insufficiency got marginal satisfactory reliability ($\alpha = 0.68$). However, all the other dimensions achieved acceptable reliability with the corresponding alpha value ranging from 0.78 to 0.83. The full scale achieved excellent reliability ($\alpha = 0.91$).

Table 44.5 presents unstandardized and standardized loadings, their corresponding significance levels, and standard errors for each scale item. The unstandardized loadings were found to be statistically significant ($p < 0.001$), while average variance extracted (AVE) and composite reliability (CR) were computed from standardized

Table 44.3 Maximum likelihood estimation in goemin rotation for 53-item job anxiety scale survey (*n*1 = 534)

Item no.	Dimension	Loading (<i>unstandardized</i>)	Communality	Eigen value
2	Stimulus related anxiety and avoidance behaviour	0.44	0.93	4.87
6		0.56	0.94	
19		0.49	0.92	
48		0.63	0.96	
22		0.66	0.92	
10		0.73	0.91	
30		0.48	0.95	
33		0.53	0.92	
63		Social anxiety	0.68	
64	0.72		0.92	
39	0.62		0.96	
40	0.54		0.94	
27	0.79		0.92	
24	0.43		0.94	
49	0.57		0.91	
51	0.66		0.92	
54	0.68		0.96	
56	0.73		0.91	
25	0.82		0.94	
26	0.77		0.92	
42	0.68		0.91	
46	0.63		0.96	
47	0.57		0.95	
31	0.71		0.96	
62	0.62		0.95	
38	0.54		0.94	
21	Health-related anxieties		0.44	0.92
66		0.51	0.92	
1		0.56	0.91	
50		0.42	0.95	
7		0.49	0.97	
12	Cognitions of insufficiency	0.57	0.95 ara>	3.88
18		0.61	0.93	
17		0.69	0.91	
43		0.78	0.94	
59		0.56	0.96	

(continued)

Table 44.3 (continued)

Item no.	Dimension	Loading (<i>unstandardized</i>)	Communality	Eigen value
37		0.78	0.96	
8		0.89	0.93	
60		0.73	0.91	
16		0.81	0.72	
4		0.60	0.92	
13		0.54	0.93	
45		0.62	0.95	
55		0.73	0.94	
67		Work-related worries	0.48	
14	0.54		0.91	
20	0.62		0.96	
57	0.69		0.98	
68	0.74		0.93	
61	0.71		0.92	
35	0.75		0.90	
69	0.48		0.95	
53	0.55		0.97	

Note Loading with < 0.40 were repressed

Table 44.4 Descriptive statistics and reliability among five dimensions of job anxiety scale survey (*n*2 = 409)

Dimensions	No. of items	Mean (SD)	Cronbach α
Stimulus-related anxiety and avoidance behaviour	8	3.36 (0.42)	0.78
Social anxiety	18	3.29 (0.71)	0.83
Health-related anxieties	5	2.66 (0.36)	0.79
Cognitions of insufficiency	13	2.42 (0.81)	0.68
Work-related worries	9	3.19 (0.51)	0.81

factor loading values to observe the convergent validity of the construct. For AVE, the recommended cut-off is to achieve > 0.50; from CR, it needs to be ideally > 0.70 (Hair et al. 2009).

The AVE values ranged from 0.39 to 0.58, signifying that the convergent validity was acceptable only for the three anxiety dimensions (Table 44.5). Thus, in the Indian context, a three-dimensional model of job anxiety stemming from external stimuli, social pressures, and health-related worries appears to be best applicable.

Table 44.5 Maximum likelihood estimation in goemin rotation for 53-item job anxiety scale survey (n2 = 409)

Item no	Dimension	Loading (Unstandardized)	Loading (Standardized)	AVE	CR
2	Stimulus-related anxiety and avoidance behaviour	0.42 (0.06)	0.67	0.50	0.74
6		0.51 (0.05)	0.72		
19		0.44 (0.05)	0.76		
48		0.61 (0.05)	0.82		
22		0.62 (0.06)	0.85		
10		0.71 (0.05)	0.93		
30		0.39 (0.05)	0.52		
33		0.47 (0.05)	0.71		
63		Social anxiety	0.56 (0.06)		
64	0.66 (0.06)		0.92		
39	0.51 (0.05)		0.83		
40	0.49 (0.06)		0.78		
27	0.63 (0.05)		0.87		
24	0.37 (0.06)		0.54		
49	0.42 (0.06)		0.81		
51	0.57 (0.05)		0.68		
54	0.46 (0.05)		0.71		
56	0.58 (0.05)		0.84		
25	0.63 (0.05)		0.89		
26	0.58 (0.06)		0.70		
42	0.49 (0.05)		0.75		
46	0.48 (0.05)		0.75		
47	0.44 (0.05)		0.81		
31	0.62 (0.05)		0.93		
62	0.51 (0.06)		0.78		
38	0.49 (0.06)		0.84		
21	Health-related anxieties	0.43 (0.05)	0.71	0.52	0.76
66		0.39 (0.05)	0.86		
1		0.44 (0.05)	0.68		
50		0.41 (0.05)	0.73		
7		0.36 (0.05)	0.51		
12	Cognitions of insufficiency	0.43 (0.05)	0.62	0.47	0.72
18		0.48 (0.06)	0.72		
17		0.52 (0.05)	0.79		
43		0.51 (0.05)	0.80		

(continued)

Table 44.5 (continued)

Item no	Dimension	Loading (Unstandardized)	Loading (Standardized)	AVE	CR
59		0.38 (0.05)	0.71		
37		0.62 (0.05)	0.84		
8		0.71 (0.05)	0.77		
60		0.68 (0.06)	0.74		
16		0.56 (0.05)	0.63		
4		0.48 (0.06)	0.58		
13		0.42 (0.05)	0.59		
45		0.55 (0.05)	0.68		
55		0.48 (0.06)	0.74		
67		Work-related worries	0.42 (0.05)		
14	0.33 (0.05)		0.76		
20	0.41 (0.05)		0.58		
57	0.56 (0.06)		0.60		
68	0.58 (0.05)		0.72		
61	0.62 (0.05)		0.75		
35	0.56 (0.06)		0.69		
69	0.49 (0.05)		0.72		
53	0.47 (0.06)		0.58		

The discriminant validity among the dimensions can be established if the AVE value of a particular dimension is greater than the bivariate correlation between that dimension and other dimensions of the scale (Fornell and Larcker 1981). Table 44.6 presents the coefficient of bivariate correlation among the five dimensions of the job anxiety scale. The correlational values ranged from 0.09 to 0.46. Comparing the values with the AVE of each dimension of the job anxiety scale, the results indicate that all the subdimensions got adequate discriminant validity among the blue-collar workforce of Indian manufacturing industries.

For examining criterion validity, the correlation among each dimension of the job anxiety scale was computed with the job burnout and workplace ostracism scale. All five dimensions of the job anxiety scale were significantly correlated with job burnout (r ranging from 0.22 to 0.28) and workplace ostracism (r ranging from 0.12 to 0.34) in their desired directions. The findings confirmed the criterion validity of our sample survey’s five-dimension job anxiety scale.

Table 44.6 Bivariate correlations among dimensions of job anxiety scale, job burnout scale, and workplace ostracism scale (*n*2 = 409)

Dimensions	1	2	3	4	5	Job burnout	Workplace ostracism
1. Stimulus-related anxiety and avoidance behaviour	–					0.32***	0.18***
2. Social anxiety	0.17*	–				0.27***	0.23***
3. Health	0.29***	0.31***	–			0.22***	0.31***
4. Cognitions of insufficiency	0.32***	0.09	0.42***	–		0.38***	0.34***
5. Work-related worries	0.11*	0.37***	0.23*	0.46***	–	0.26***	0.12***

Note * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

44.5 Discussion and Organizational Implication

The present study intended to investigate the psychometric properties of job anxiety among blue-collar employees of Indian manufacturing industries. EFA and CFA were separately conducted by splitting the aggregate sample. At the item level, because of cross-loading on 2 or more factors, items 5, item 13, item 15, item 28, item 29, item 44, and item 65 got eliminated. Similarly, for factorial loading weight with a variance ≤ 0.20 , the items such as item 11, item 23, item 36, item 41, item 52, and item 70 were not retained in our EFA. Due to a loading value of < 0.40 , an entire subscale was removed, i.e. conditioned or post-traumatic anxiety. In the final model, the subscales—(a) experience of panic or other psychosomatic symptoms while at work and (b) functional impairment was removed since these were left with only two items each. In our final EFA model, the job anxiety scale got retained with the original five dimensions with 53 items for further study.

The final model acknowledged through EFA was re-confirmed in CFA with an acceptable model fit. One dimension, i.e. cognition of insufficiency, got marginal satisfactory reliability. However, all the other dimensions of the job anxiety scale achieved acceptable reliability scores. CFA findings recommended that the five dimensions had adequate construct validity (both convergent and discriminant). Finally, each of the five dimensions was found to have a significant correlation with job burnout and workplace ostracism, suggesting decent criterion validity.

Decreased employee engagement and happiness pose a critical threat to the manufacturing sector with two worrisome outcomes: employee burnout and turnover intentions (Pandey et al. 2019). The blue-collar economy is rising in today’s time of economic slowdown. Human resource firms are experiencing the rise of a gig economy of blue-collar workforce. The job demand in the manufacturing sector and the infrastructure development projects are the probable reasons behind it. As per the Associated Chambers of Commerce and Industry of India (ASSOCHAM),

an annual growth of 17% is expected from India's rapidly emerging gig economy. Research substantiates that in 2020, out of 1.4 million job demands, the gig economy contributed as large as 80%. ASSOCHAM forecasts India's gig economy to rise to \$455 billion by 2024. As per Economic Survey 2020–2021, India shows a V-shaped recovery across the major economic parameters. The pandemic has disrupted the labour market, inducing severe financial distress, a sharp decline in productivity, and highly crunched disposable income. The post-COVID economic turmoil has impacted blue-collar workers more than white-collar workers, most of whom were able to continue working from home. Such employees work on-site, meaning they do not have the luxury of working from home. Hence, for blue-collar workers, job anxiety may predominantly hover around health-related anxiety (anxiety related to getting contaminated with COVID-19 or infecting family members due to daily commutes and conducting jobs involving touching surfaces). This may have caused an increase in the state of work-related anxiety for blue-collar workers exponentially. The biggest challenge faced by companies is ensuring employees' wholehearted engagement (Singh and Gupta 2015). ICD code F41.9 became effective as the 2021 edition of ICD CM codes, characterized by anxiety and fear, which often befriended with physical symptoms of restlessness, panic attacks, and phobia. This recent inclusion indicates the changed intervention of organizations.

44.6 Limitations and Scope for Future

Psychometric studies, while unfolding the behavioural response codes, depicted four limitations. *First*, the questionnaire was developed in only one language, restricting a few from entering the sample space. *Second*, we have restricted our sample size to 943 respondents and only to the full-time technical blue-collar employees. However, in the present scenario, number of part-time and contractual blue-collar workers is mushrooming, giving birth to a blue-collar gig workforce. *Third*, the age group range of 22–27 comes under the category of millennials, who are highly energetic and ambitious. The scope of grooming this group is sizably high compared to the range of 39–54 years. Taking the view of this age group might have opened new windows of behavioural responses. *Fourth*, we have collected sample data only from Odisha. As per ASEEM, Odisha contributes 11% of India's blue-collar workforce supply. Bihar (11%), Assam (13%), Uttar Pradesh (17%), and Andhra Pradesh (17%), being the other four critical states, might bring in newer or unique psychometric properties. Working on the limitations may bring new understanding to the study; hence, it may be visualized as the direction for future research on job anxiety.

44.7 Conclusion

The future of blue-collar workers may experience higher job insecurity and increased opportunities to maximize earnings with the growth of gig workers. Digitization of technologies, organizational restructuring, and progressive evolution of economic activities are impacting 450 million Indian blue-collar workers. The outbreaking time of the pandemic has hit blue-collar workers hard, making the economy experience a sharp decline. The influx of blue-collar workers influenced the economic recovery process. The increased requirement of man-hours fetched what-not workplace facilities, making the worst-hit blue-collar workforce chunk work with great vigour and a sense of pride. Achieving sustainable workplace engagement is a time-exhaustive process. Positive thoughts and motivated engagements need to go through the mindset-cleansing process by discarding the job stressors in today's recessionary times. Organizational intervention with empathy may decrease the job anxiety. The *Missing Tile Syndrome* (Attri and Negi 2020) of job anxiety constantly looks for the tile of satisfaction to experience happiness in totality. Productivity is not a function of physical work conditions or money compensation paid. Our study focuses on the presence of alarming job anxiety among blue-collar workers, with possible measures to reduce it.

Conflict of Interest There is no conflict of interest.

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Chapter 45

A Conceptual Relationship Between Workplace Ostracism and Knowledge Hoarding: Mediating Role of Perceived Organizational Politics



Surumi Muhammad and Devi Soumyaja

45.1 Introduction

Knowledge hiding is a significant concern for the organization as it creates a negative impact (Connelly et al. 2012) and reduces organizational performance by having a detrimental effect on organizational collaboration, business policy implementation, and creativity (Peng 2013). Motivating employees to share knowledge among coworkers is difficult because it needs a supportive organizational and social context (Ozer and Voge 2015). Some critical elements recognized as predictors of employee knowledge sharing are organizational environment, structure, fairness, interpersonal trust, and supervisory style (Le and Lei 2017; Wang and Noe 2010). Despite the organization's encouragement of information sharing, some employees continue to hoard knowledge (Bock et al. 2005). Knowledge hoarding can be defined as "an individual's intentional attempts to conceal the knowledge that has been requested or unrequested by another person" (Evans et al. 2015). Three significant factors motivate us to consider knowledge hoarding as an outcome of workplace ostracism. Firstly, employees' intentions to hoard knowledge are preceded by an internal competition, previous opportunistic behavior of coworkers (Anaza and Nowlin 2017), and hostile acts (Holten et al. 2016). Thus, earlier research suggested that the job atmosphere and dissatisfaction brought on by negative occurrences were the causes of knowledge hoarding.

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Secondly, Zhao et al. (2016) noted that reciprocal beliefs and social exchange are two additional fundamental mechanisms that support knowledge hoarding. On the other hand, employees tend to react negatively to unfavorable acts from other organizational members. Finally, research shows that bad experiences with an organization significantly influence an individual's attitude and behavior more than favorable ones (Baumeister et al. 2001). Therefore, understanding the impact of negative workplace experiences will aid in identifying the behavioral reactions of employees.

Thus, considering the foregoing factors, this study focuses on how workplace ostracism, an unpleasant incident that inhibits employees' ability to interact socially (Williams 2007), may result in knowledge hoarding. Workplace ostracism refers to "the extent to which an individual perceives that he or she is rejected, ignored, or excluded by others in the workplace" (Ferris et al. 2008). As an effect, the focal employee may feel that the coworkers do not value their thoughts, views, or ideas. Workplace ostracism is considered a form of social death (Sommer et al. 2001) and leads to a string of unfavorable outcomes like unethical behavior (Qi et al. 2020) and counterproductive work behavior (Hitlan and Noel 2009; Zhao et al. 2013). However, the research on ostracism in the workplace yields contradictory findings. According to Hitlan and Noel's (2009) hypothesis, different demands may influence employees' reactions to ostracism at work. For instance, the response to ostracism might lead to cooperation in the form of prosocial behaviors if they want to satisfy the desire for belongingness (Williams and Sommer 1997) or deviant behavior to satiate the control need (Chung 2015). Previous researchers have recommended management, and organizational behavior researchers include context when examining employee behavior (Johns 2006). Therefore, we propose that one of the factors that workers consider when deciding between the desire for control and the need to belong when they are ostracized may be the perception of the context.

Again, one of the prior studies on workplace ostracism and knowledge hoarding has been established through the mediating role of defensive silence (Khalid et al. 2020). However, workplace ostracism is proven to have both positive and negative impacts on employees. So why people who experience workplace ostracism choose defensive silence like knowledge hoarding rather than cooperative behaviors like knowledge sharing has not yet been fully proven by previous researchers. One of the ways to understand this will be by considering the contextual factors because both the environmental context and the victim's characteristics have a role in the decision of an ostracized person whether they will advance behavior and decrease or curtail their positive behavior (Howard et al. 2020). A recent study (Bilal et al. 2020) highlighted that the nature of the victim has a role in the reaction to workplace ostracism. Yet, the role of perception in context has not been discussed so far.

Thus, to better understand the connection between knowledge hoarding and workplace ostracism, this study looks at the mediating impact of a contextual factor—perceived organizational politics. Perceived organizational politics is "an individual's subjective evaluation of the extent to which the work environment is characterized by coworkers and supervisors who demonstrate self-serving behavior" (Ferris et al. 2000). An important aspect of the workplace that affects how employees see politics is how they understand the culture, acceptable behaviors, and relationships between

organizational members (Ferris et al. 2002). Since perceptions are crucial in determining our reality, employees may consider perceived organizational politics when determining how workplace ostracism is understood.

Attribution theory (Martinko et al. 2006) provides grounds for the relationship between workplace ostracism and knowledge hoarding via perceived organizational politics. This theory contends that when faced with challenging working conditions like ostracism, individuals' attitudes about their work and environment are influenced by their tendency to blame external causes for their difficulties (Hershcovis and Barling 2010). Workplace ostracism is considered a unique type of mistreatment as it is a passive form and doesn't involve any active adverse treatment from the perpetrator (Robinson et al. 2013). Hence, its intention is uncertain for the target. As a result, internal and external variables might be cited as the cause of the target. There is a greater likelihood that the employee will engage in prosocial conduct to improve their sense of self if they ascribe the cause to internal reasons like low social profile, low support, and social loafing. However, when they place the blame on the workplace environment, such as perceived organizational politics, there are more chances for employees to engage in self-serving behaviors like knowledge hoarding since it gives them greater control over confidential information and increases their influence and authority inside the organization (Burkhardt and Brass 1990).

Thus, based on the above discussion, this study generates four potential propositions. The study will first establish a rational link between knowledge-hoarding behavior and workplace ostracism. Second, the study examines how an employee views ostracism as organizational politics. Thirdly, it will strive to understand the relationship between perceived organizational politics and knowledge-hoarding behavior. Finally, we will explain how perceived organizational politics mediates the relationship between workplace ostracism and knowledge hoarding. This will contribute to a previous study that established defensive silence as a mediator between knowledge hoarding and workplace ostracism (Khalid et al. 2020).

Further, research shows that workplace ostracism is promoted in politicized organizational climates (Karim et al. 2021). Here, we use a different strategy by putting forth the complementary opinion that worker' perceptions of a political and organizational atmosphere may result from their experience with workplace ostracism. These ideas represent new and significant processes through which such exposure may lead workers to hoard knowledge.

45.2 Literature Review and Conceptual Framework

45.2.1 Workplace Ostracism

Workplace ostracism is when “an individual or group omits to take actions that engage another organizational member when it is socially appropriate to do so” (Robinson et al. 2013). As an effect, the focal employee may feel that the coworkers

do not welcome their ideas, opinions, and suggestions. When a worker is entitled to be invited to a meeting but is not, or when a worker observes that a group awkwardly shifts the subject when they join them are examples of workplace ostracism (Robinson et al. 2013). Scholars are increasingly interested in ostracism in the workplace and other types of social rejection (Balliet and Ferris 2013) since exclusion is a sort of “social death” (Sommer et al. 2001). Workplace ostracism is a ubiquitous phenomenon that most US employees have reported suffering social alienation. Also, according to the survey by Fox and Stallworth and O’Reilly et al. (2015), 66% of employees receive “silent treatment” at work, and ostracism is more prevalent in the workplace than other forms of abuse correspondingly. Moreover, workplace ostracism creates detrimental effects that lead to psychological distress (Wu et al. 2012), reduced family satisfaction through the work-family conflict (Liu et al. 2013), hinders prosocial behavior (Balliet and Ferris 2013; Haldorai et al. 2022) and interpersonal citizenship behavior (Zhang et al. 2017), and also promotes counterproductive behavior (Zhao et al. 2013; Yang and Treadway 2018). Likewise, workplace ostracism also leads to reduced work engagement and affects the performance of the employees (Leung et al. 2011). Also, employees will feel less connected to the organization and avoid organizational citizenship behavior and information sharing due to workplace ostracism (Zhao et al. 2013); instead, they will hoard the knowledge (Zhao et al. 2016; Khalid et al. 2020).

45.2.2 Knowledge Hoarding as an Outcome of Workplace Ostracism

Negative experiences may impact individual and organizational outcomes in the workplace. For instance, at the personal level, workplace ostracism leads to emotional exhaustion (Jahanzeb and Fatima 2018), affects sleep quality (Waldeck et al. 2020), leads to psychological distress (Wu et al. 2012), anxiety (Ferris et al. 2008), and stress (Sarwar et al. 2019). At the organizational level, workplace ostracism promotes counterproductive behavior (Zhao et al. 2013; Yang and Treadway 2018) and the intention to leave (Singh and Srivastava 2021; Anasori et al. 2021). Thus, in the organizational context, workplace ostracism is considered a significant factor that can affect personal and organizational outcomes and eradicate social exchange behavior. Knowledge hoarding may be facilitated by unfavorable social exchange among employees, as there are indications that knowledge hoarding can be associated with the quality of work-related interactions (Evans et al. 2015). On the other hand, employees share knowledge with peers with frequent and good-quality contact (Kipkosgei et al. 2020). For high-quality contact, frequent and quality social interaction is essential. Such high-quality social interactions are, in turn, dependent on workplace climate and mutual trust (O’Reilly et al. 2015), which are affected by workplace ostracism. Therefore, from the above discussion, it is evident that people share knowledge based on positive social interactional aspects; ostracism is likely to erode the quality of social

interaction (Takhsha et al. 2020). Thus, it appears logical to consider ostracism at the workplace as an interpersonal antecedent of knowledge hoarding.

Workers who are excluded may also exhibit more significant psychological and behavioral effects since their sense of belonging to their group is affected. It is because ostracized personnel are more prone to have distorted views of social events and interpersonal interactions (Smart Richman and Leary 2009). So, they will defend themselves by engaging in avoidant activities (Twenge et al. 2003). Therefore, this creates a substantial relation between knowledge hoarding and workplace ostracism since the isolated person may limit knowledge sharing as a behavioral response to distorted interpersonal interaction. According to Riaz et al. (2019), even when an ostracized person is entirely dedicated to the organization, they regard the situation as upsetting and avoid sharing information. Thus, the following proposition is our suggestion in light of the facts presented:

P1. Workplace ostracism and knowledge hoarding are positively and substantially related.

45.2.3 Attribution Theory

Ostracism at work is a subtle abuse that often takes a passive attitude; thus, it might leave the target uncertain about what is being done to them. Because of this, there is a potential that the focused employee will tend to blame both internal factors of him and external factors for the problem. Furthermore, workplace ostracism is frequently debated due to the mixed reactions it causes, which might take the shape of prosocial or antisocial behavior. These considerations lead us to believe that the attribution theory best explains workplace ostracism response. The basis of attribution theory is that people want to know what caused important events in their life, especially whether such occurrences are necessary, unfavorable, or unexpected (Weiner 1985). People evaluate an action or behavior in terms of its causes and respond to that action or behavior. Targets may try to infer the cause based on the context if the reason is not sure to them. As ostracism is a subtle form of mistreatment and takes a passive form, its cause is not always apparent to the target. So, it is critical to understand if the target relates ostracism to an internal cause, such as a personal error that would explain or justify punishment in the form of ostracism or an external cause. According to the self-serving bias, where individuals ascribe success internally and failure outside (Miller and Ross 1975), there is a greater likelihood that employees would assign the reason to external causes. In the instance of ostracism, the prior studies have not fully clarified what causes the target employee to behave positively or negatively toward ostracism. We contend that the response may differ depending on whether the attribution is internal or external. Even though ostracism is painful, the targets may experience fewer negative feelings toward the perpetrators if they internalize the act as reprisal for a mistake they have made. However, if the targets ascribe ostracism to an external cause, they are more likely to feel contempt for the ostracizers, believing that these individuals are wicked people who are out to harm them. In this situation,

the targeted may become disengaged from the organization's goals and lose interest in advancing them, rejecting or punishing those who have rejected them (Williams and Sommer 1997). As a result, there are higher chances that a target would respond to workplace ostracism by engaging in selfish behaviors like knowledge hoarding when they ascribe the reason for the exclusion to an external factor like organizational politics. The target in this situation is self-centered and tries to maximize their aims while putting out less effort on behalf of the group. The above arguments are in line with the proposal of Williams (2007) that in the event of workplace exclusion, the employees would decide between prosocial and antisocial conduct. It is based on how workplace ostracism threatens the needs of the employee.

On the other hand, a target will act prosocially and make an effort to work harder or be nice if being excluded threatens their desire to belong and sense of self-worth. However, the target will exhibit antisocial behaviors and turn hostile or indifferent toward the group if the ostracism threatens the desire for control and meaningful existence (Williams 2007). Additionally, according to Smart Richman and Leary's (2009) research, targets are more likely to engage in antisocial activities when they believe that ostracism is unjust. According to the previous researchers' results, it is still unknown whether individuals would see something as an unfair act or an internal factor when they get ostracized. We believe that employees may attribute their cause to internal or external sources when they are ostracized, depending on how they see the workplace context. Therefore, the attribution theory may serve as a viable theoretical foundation for describing how perceived organizational politics at work relate to knowledge hoarding and workplace ostracism. On the other hand, if employees see organizational politics as the root of workplace ostracism, they would blame outside forces and consider it unjust. Thus, there are more chances to involve themselves in antisocial behaviors like knowledge hoarding, which is consistent with the results of Smart Richman and Leary (2009) that targets are more likely to engage in antisocial actions when they believe rejection is unjust.

45.2.4 Perceived Organizational Politics as the Mediator

Organizational politics is widespread in workplace settings (Drory and Meisler 2016). It refers to "intentional behaviors or actions that promote or protect one's self-interest at the expense of others or organizational goals in the workplace" (Goo et al. 2019). As a result of employees' perceptions of the political climate as unreasonable and unfair, they see it as a menace to their interests and well-being (Cho and Yang 2018). Therefore, organizational politics have received much attention from scholars who view them as significant (Meisler and Vigoda-Gadot 2014). Perceived organizational politics affects employees' personal and organizational outcomes. For instance, at the individual level, perceived organizational politics negatively affect employee well-being (Ullah et al. 2019) and moral efficacy (Khan et al. 2019). At the organizational level, perceived organizational politics is found to be negatively associated with organizational commitment (Lau et al. 2017), extra-role performance (Karatepe

2013), employee silence (Sun and Xia 2018), knowledge hiding (Malik et al. 2019), and counterproductive work behaviors (Baloch et al. 2017). In general, perceived organizational politics tends to give employees the impression that their workplace is unjust and unfair, with self-serving actions impacting their personal and professional well-being.

Intergroup collaboration, job clarity, and the fairness of rewards and recognition are just a few of the aspects that influence how politically charged an organization is seen by its employees (Parker et al. 1995). In addition, Poon (2003) found that the trust climate significantly predicted views of organizational politics. Furthermore, Barling (1996) discovered that interpersonal mistreatment at work might impact the environment of trust. Ostracism at work can have emotional effects like distrust of colleagues since it is a kind of interpersonal mistreatment. Besides, workplace ostracism undermines collaboration since it excludes others, diminishes recognition, and interferes with employees' demands for a sense of belonging (O'Reilly and Robinson 2009). So, in line with the above discussion, we suggest that perceived organizational politics may be regarded as an outcome of workplace ostracism.

The attribution theory also asserts that feelings may prompt people to look for the reasons behind things that have happened (Weiner 1985). People frequently blame others or circumstances for unfavorable events (Sommer et al. 2001). Employees who suffer from ostracism may accuse the organization of becoming politicized to foster workplace ostracism. Again, the organizational trust may be impacted because the social context plays a part in how individuals account for why they are being ostracized at work (Banki 2012). As a result, through attribution processes, ostracized employees may believe that organizational politics are to blame for interpersonal abuse like workplace ostracism. So, when workers feel ostracized at work, they are more likely to have a negative notion of the organization and perceive organizational politics. So, based on the viewpoints mentioned above, we suggest that.

P2: Workplace ostracism is positively associated with the perceived organizational politics

We also predict a positive relationship between the experience of perceived organizational politics and knowledge-hoarding behavior. According to attribution theory, when employees have a negative experience in the organization, there are more chances to attribute the cause to external factors like organizational politics. Thus, there are more chances to hoard the knowledge as they ascribe the grounds to the organizational aspect with a feeling that organization doesn't deserve loyalty (Kakarika et al. 2017). Moreover, according to earlier studies, employees who believe their organization is more political would be tempted to act negatively rather than positively (Chang et al. 2009). That view will encourage them to avoid acts that would help the organization, as they believe that the organization does not care much about their well-being (De Clercq and Belausteguigoitia 2017). Hence, they would think that if they hoard the knowledge, they can regain control over confidential information and increase their influence and authority (Burkhardt and Brass 1990). In addition, recent research has found that perceptions of organizational politics lead to

knowledge-sharing hostility (Chen et al. 2022) and knowledge hiding (Malik et al. 2019).

In a related vein, according to Chen and Indartono (2011), employees will only exhibit less commitment to their organization and show psychological withdrawal if they perceive the organization to be highly politicized. This absence of emotional attachment is further supported, consistent with attribution theory, that hoarding information is a likely course of action the ostracized employee may pursue. With all the evidence presented above, we propose that.

P3: There is a positive relationship between perceptions of organizational politics and Knowledge-hoarding decisions of employees.

Considering the above discussion, we also propose that exposure to workplace ostracism enhances the employees' knowledge-hoarding behavior via their perception of politics in the organization. The mediating role of perceived organizational politics on employees' unfavorable work conditions like job ambiguity (Poon 2003) has already been studied. Also, a recent study considered and identified a significant relationship between workplace bullying and turnover intention via perceived organizational politics (Clercq et al. 2021). Likewise, we also add a new view of research to this line by proposing a relationship between workplace ostracism and knowledge hoarding through perceived organizational politics. The employees are likely to attribute the cause of negative experiences like workplace ostracism to organizational factors like the politicized environment of the organization, and it may trigger employees to resort to antisocial behavior like knowledge hoarding. Thus, we propose that.

P4: Employees' perceptions of organizational politics mediate the relationship between their exposure to workplace ostracism and knowledge hoarding.

Thus, the conceptual framework that is proposed above links workplace ostracism to knowledge-hoarding behavior via perceived organizational politics. The propositions covered above are shown in Fig. 45.1, which is a representation of the conceptual framework.

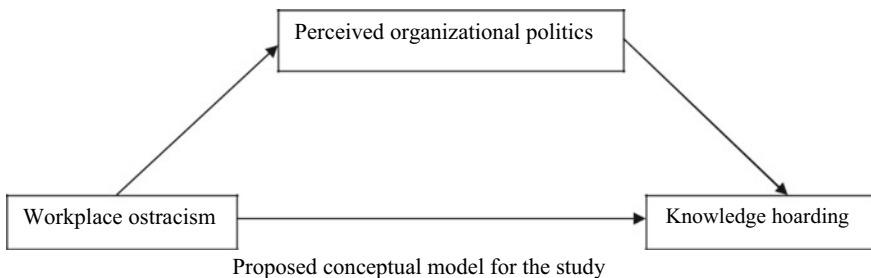


Fig. 45.1 Proposed conceptual model for the study

45.3 Discussion

The study attempts to conceptually analyze the relationship between workplace ostracism and knowledge hoarding and how perceived organizational politics mediates the relationship between workplace ostracism and knowledge hoarding. Based on Zhao and Xia's (2017) and Khalid et al. (2020) findings, we argue that there is a positive and substantial relationship between knowledge hoarding and workplace ostracism, which indicates that there are more chances for the ostracized employee to hoard knowledge. With the help of pertinent literature, this study also argues that perceived organizational politics mediates the link between workplace ostracism and knowledge hoarding. The justification for the proposed relationship can be found in the attribution theory. In the context of workplace ostracism, employees are unsure of its reason as it is a passive form of mistreatment. If an employee attributes the cause to external factors like organizational politics, a need for reclaiming control rather than a desire for belonging will be more important for them.

Interpersonal mistreatment at work might have an impact on the environment of trust, as discovered by Barling (1996). Accordingly, since workplace ostracism is interpersonal mistreatment, it creates mistrust among organizational members, and a deteriorating atmosphere of trust is one of the indicators of perceived organizational politics. Thus, workplace ostracism can be viewed as an event of organizational politics by the employees.

This study also attempted to conceptually demonstrate how a higher perception of organizational politics leads to knowledge hoarding by inducing a feeling among employees that their organization is unfair. Based on previous research, when an employee perceives an organization to be more political, it will tempt them to engage in hostile acts instead of positive thinking and deeds. Thus, we reached the proposition that workplace ostracism leads to knowledge hoarding via perceived organizational politics. The study highlights that the management of workplace ostracism is crucial to contribute to an organization's knowledge management. An organization that promotes a less political environment marked by individual trust might offer a unique benefit in creating social networks and active information and knowledge sharing.

45.3.1 *Theoretical and Practical Implications*

We provide four theoretical additions to fill the gap in the expanding corpus of extant research. First, it is common to define knowledge hoarding as the deliberate concealing of knowledge that may be requested or not (Evans et al. 2015). The majority of research, however, has concentrated more on knowledge-hiding conduct and has not regarded this behavior as a result of negative reciprocity. Therefore, we propose knowledge hoarding as a result of unfavorable exchange and focus on the connection between knowledge-hoarding behavior and workplace ostracism.

Second, workplace ostracism will influence employees' behavior and performance since it jeopardizes their relationships with coworkers (Ferris et al. 2008). Researchers have also previously discovered that workplace ostracism affects how coworkers interact (e.g., Fiset et al. 2017; Ferris et al. 2017). Given this, we anticipate that workplace ostracism can harm employees' professional relationships by encouraging knowledge hoarding. As we proposed, the ostracized individual may restrict knowledge sharing and is more prone to hoard knowledge as a behavioral reaction to distorted interpersonal relations.

Third, we expand Karim et al.'s (2021) explanation of how a political organizational atmosphere fosters workplace ostracism by taking a different stand on how workplace ostracism is perceived as organizational politics. According to our study, ostracizing behaviors can also lead to beliefs about the existence of a politicized environment. It is because employees may perceive ostracism as a politicking behavior that affects the trust climate, which Poon (2003) found to be a predictor of how employees perceive organizational politics. Additionally, we have suggested, using attribution theory, a connection between knowledge hoarding and workplace ostracism. It condenses that people's attitudes about their work and environment are impacted by their propensity to attribute external factors to their problems, such as organizational politics when faced with harsh working conditions like ostracism (Herscovis and Barling 2010). Notably, we provide another dimension for when ostracized individuals are more likely to take a reactive rather than a proactive stance by revealing the connection between workplace ostracism and knowledge-hoarding behavior through attribution theory. Along with it, as indicated by Howard et al. (2020), the study will also help address the impact of environmental context in understanding the decision of an ostracized individual and whether they would advance conduct and lessen or limit their positive behavior while being ostracized.

Finally, the underlying process still needs to be thoroughly investigated, even though Zhao and Xia (2017) and Khalid et al. (2020) identified a substantial correlation between workplace ostracism and knowledge hoarding. Hence, this study identifies a previously unrecognized factor—perceived organizational politics—as the mediating factor in the connection between knowledge-hoarding behavior and workplace ostracism. The results of our literature review indicate that when employees regard organizational politics as a norm, they are less inclined to share knowledge with others. By establishing a novel contextual antecedent of knowledge hoarding, namely perceived organizational politics, we add to the literature on knowledge hoarding (e.g., Anaza and Nowlin 2017; Evans et al. 2015; Holten et al. 2016).

Along with the above-mentioned theoretical implications, our study has a particular practical use. According to the study, ostracism at work may cause employees to hoard knowledge. Therefore, a company's managers should prevent the employee from ostracizing conduct. The organization should identify the ostracized individuals to avoid an environment where knowledge-hoarding behavior grows. Due to the passive nature of workplace ostracism, such detention may be more difficult. Nevertheless, observing interpersonal interactions between coworkers, supervisors, and subordinates might be an excellent place to start when looking for workplace ostracizing conduct. Despite these initiatives, the vagueness of workplace ostracism

makes it difficult to eradicate it. Therefore, the organization should set up complaint channels to address ostracized employees' demands for assistance and support and provide prompt and appropriate psychological counseling if they get a clue that ostracism is taking place in the workplace. Organizations must also educate managers and supervisors about the behaviors that encourage knowledge hoarding.

Additionally, one should learn to effectively eliminate it by recognizing the indicators or modifications in workers' conduct, such as decreased engagement in organizational activities and showing silent behavior. Also, with literature support, we proposed that ostracized employees are likely to hoard knowledge because of the perception of the politics in the organization. Therefore, organizational strategies may be created to steer ostracized workers away from accusing their company of supporting dysfunctional political games. Senior managers might develop platforms for internal communication that make it clear that favoritism and self-serving behavior are not permitted in the organization.

45.3.2 Limitations and Future Research Directions

Specific limitations of the study need consideration from the researchers. First, the study connects knowledge hoarding through perceived organizational politics to workplace ostracism. The perceived organizational politics model created by Ferris et al. includes job environment and personal factors as antecedents of political views. We should have considered the importance of personal variables in determining the signs of political conduct among employees and who is more likely to hoard knowledge in the face of coworkers who are ostracizing them in a politicized setting. Therefore, to fully understand the proposed study, it is also possible to consider the individual characteristics of employees.

Second, it will be helpful to examine the role of power imbalances in how organizational politics are perceived when someone is ostracized because people perceive politics as being highly prevalent in organizations that come from cultures where power is unequally distributed, there is ambiguity and chaos, and strong in-groups and coalitions are formed (Drory and Vigoda-Gadot 2010; Romm and Drory 1988). Third, individual personal resources play a significant role in motivating and inspiring workers to battle politics' unfavorable and undesirable impacts. Therefore, personal assets like psychological capital can assist workers in utilizing their coping skills to lessen the detrimental consequences of perceived organizational politics. Thus, who is more likely to perceive politics and try to restore control when they feel ostracized? When will they try to align themselves with the highly political group by becoming more conformist? These are some fascinating questions that require attention from future researchers.

Finally, utilizing data gathered from the workforce, future research must empirically investigate the links between perceived organizational politics, knowledge hoarding, and workplace ostracism. For instance, workplace ostracism may have a detrimental effect on service sector personnel since the service environment is a

shared and social phenomenon (Salanova et al. 2005). Therefore, gathering information from workers in the service industry may be one way to confirm the link that has been proposed objectively. Additionally, as the use of work teams increases, employee engagement is an essential element of business productivity and service performance (Salanova et al. 2005) in the service sector. Ostracism in the workplace negatively influences employee engagement, claim Leung et al. (2011). Thus, it may be beneficial to further study interpersonal difficulties like ostracism at the team level in the service industry. Finally, since highly effective knowledge sharing is one of the essential steps to enhancing service innovation performance of service organizations (Hu et al. 2009), which is a key to their success, it is crucial to understand whether overlooked mistreatment, such as ostracism, results in knowledge hoarding in the service sector employees.

45.4 Conclusion

Various internal circumstances may influence employees' intent to hoard knowledge; being ostracized at work is only one example. By drawing a logical relationship between employees' knowledge-hoarding behavior and workplace ostracism, we aimed to advance previous research with this study. The study also suggested a new mediating factor, perceived organizational politics, via which marginalized workers may hoard knowledge to achieve power. Additionally, by using attribution theory as a novel lens, our study broadens the study of knowledge hoarding and ostracism at work.

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Chapter 46

Role of Induction Programme in Organizational Learning and Knowledge Creation



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46.1 Introduction

Whenever we talk about onboarding in Human Resource Management, induction programme becomes an important component of it. The term is synonymously used with onboarding and refers to as a process of combining the people with technology and company processes for ensuring the best outcomes to the business from the new business hire (Snell 2006). There is always some amount of anxiousness from the side of the newly hired employees who join any organization. The employees think of it as a new beginning of a career, and the organizations think it as part of their new talent who would come up with new ideas and responses and would benefit organizations towards achieving their objectives. The induction phase provides new employees, the opportunity to know more about the organization. During induction programme, a warm welcoming of the newly recruited employees takes place and in addition values and mission of the company, business functions, the expectations from them are all communicated (Cesário and Chambel 2019).

Onboarding or induction refers to those practices started by an organization or its agents to facilitate new employee's adjustment to their respective roles (Klein and Polin 2012). In general, an induction programme may include a formal training process carried out by experts or may involve co-workers and supervisors conducting the training together (Klein and Weaver 2000). From the perspective of employees, an induction programme allows them to adjust to their new work environment faster, realign their respective attitudes, knowledge and behaviours in accordance with the new organization, and also to get rid of any insecurity (Bauer et al. 1998; Cable and

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Parsons 2001). Induction as a process is important because whenever new employees join, there are always chances that they may not like the workplace and may even possibly leave. If as an organization there has been some cost incurred in training employees into certain job-specific skills, then the cost of recovering such investment is never possible if those employees leave in a short span of time. With the help of induction programmes, newly hired employees are more likely to settle faster and there can be some reduction in costs in the long run (Cooper-Thomas and Anderson 2006).

Companies like Google, Facebook, Apple, EY offer induction sessions at three levels—macro, functional, and micro (Cesário and Chambel 2019). At macro-level, structured corporate programmes are designed to communicate information about company in broader sense like vision, mission, values, the systems within the company, networks, forums, appraisal systems, etc. These happen usually in a conference room setting. At functional level, the new recruited employees are inducted specifically based on their respective functional area like operations, IT, marketing, finance, HR, wherein detailed specifications of their domain of work are communicated. At micro-level, employees are given the detailed work procedures and the kind of assignments which they need to follow. The macro-level is where leadership can come and interact with the new employees. Micro-level induction may also happen as a part of on-the job training because it is more specific to their job description. E.g.—in the induction programme of a group of analysts, the employees might have been told about the tools that they need to learn; however, the actual training may happen during the first few days of the job. In consultant companies like EY, Deloitte, companies provide access of online software courses which they would need to learn on the job. However, the information about access of tools is provided during the induction programmes.

Seeing to the enormous benefits associated with induction programmes, it is imperative to question the possibility of induction programmes being a platform to create new learning and facilitate knowledge creation. For instance, Shore and Walshaw (2018) state that support from induction programme is an essential means of learning to enhance professional development and absence of such programme could lead to negative work experiences such as stress, anxiety, and bad self-reflection. However, the study does not specify through what process induction programme can foster better learning of employees. Chidambaram et al. (2013, p. 143) found in their study on railway employees that contents of induction programme like ‘department etiquettes’, ‘Norms and Values’, ‘Communication procedures’, ‘HR Policies’, etc. and the skills obtained influence the effectiveness of induction programmes, but lack in explaining the manner in which the aforementioned contents of induction programmes lead to organizational learning. In context of education field, a more recent study, i.e. Raman et al. (2013), examines the role of Knowledge Management System (KMS) in supporting induction programme and finds that there is a positive attitude among the lecturers about accepting KMS. However, the study does not specify the process by which induction programme generates learning and aids towards creation of useful knowledge. Thus, there is a significant gap in the extant literature on how induction programmes lead to organizational learning.

This study theorizes on the dynamic theory of knowledge creation (Nonaka 1994) and integrates the broad literature on three topics, namely induction programmes, Socialization, psychological safety. The research question that is addressed in this study is:

RQ 1: Can induction programme facilitate organizational learning and knowledge creation in today's organizations?

RQ 2: If yes, then how?

46.2 Literature Review

46.2.1 Socialization

The origin of Socialization at an organizational level can be referred back to Louis (1980, p. 229) who defined organizational Socialization as 'a process by which an individual comes to appreciate the values, abilities, expected behaviours, and social knowledge essential for assuming an organizational role and for participating as an organization member'. Socialization at a firm level includes interaction among various actors within the firms which would lead to better analysis and problem solving (Gupta and Govindarajan 2000). There can be two types of Socializations—formal and informal. Formal Socialization implies that there are well-established structures, e.g. Board of Governors, which would interact on a regular basis towards a defined purpose. Informal Socialization implies any interaction which happens outside the workplace, e.g. team dinner (Jia, Rutherford and Lamming 2016).

Nonaka (1994, p. 19) state that, 'the process of creating knowledge through shared experiences is called Socialization'. If we see apprenticeship as a work, the learnings happen by mere observation, imitation, and practice. Thus, any situation where people are involved in conversations would lead to creation of tacit knowledge through the means of shared experiences. In an induction programme, people who come to join in a particular role may have the same qualification but from different colleges and geographies. This creates a variation in the level of expertise. For instance, if in a particular job the proficiency in R language is a necessity. Even though the new recruits might possess the skill, there may be some variation in the level of know how. Induction programme through the means of Socialization would encourage participants to come together and involve themselves in sharing and discussion of the shared expertise.

Further, the process of induction programme involves sharing of contacts, job roles, meetings with some key organizational members which could be instrumental in generating fruitful conversations which in turn can generate good ideas that could further benefit the organization as a whole. Apart from that newly recruits get to know each other on a personal level which can further entrust informal meetings outside their workplace. Going by this description, we posit that Socialization should be one of the major outcomes of any induction programme. Socialization should develop

necessary bonds among the newly recruited employees which would impact their interaction levels. This study proposes,

Proposition 1 *Induction Programme would lead to Socialization among the newly recruited employees.*

46.2.2 Psychological Safety

The historical work of Schein and Bennis (1965) defines psychological safety from the perspective of managing organizational change. Psychological safety is the extent to which employees in an organization feel safe and confident to manage any change. Kahn (1990) brought a more focussed view by stating that individual perception towards a safe and secure workplace is likely when they have supportive and trusting relationships with their colleagues. Edmondson (1999) added to this team level notion by stating that it is because of shared belief among the members of a team which creates a place where employees would be free to explore new ideas and express them without any hesitation. The conceptualization of psychological safety has taken place at three different levels—individual, team, and organizational. In their review, they had also stated that when it comes to analysis, it is best to study psychological safety at group level because interactions that happen in a group play a significant role in employee's sense of psychological safety (Edmondson and Lei 2014).

Exhibition of psychological safety allows teams to respect each other and promote learning behaviours such as asking questions and discussing each other's mistakes (Johnson, Keating and Molloy 2020). While discussing the relevance of psychological safety and teams, trust is another element which is essential. Although there is lack of any concise definition of 'trust', this study considers the definition of Mayer et al. (1995, p. 712) which states 'trust' as 'the willingness of a party to be vulnerable to the actions of another party, based on the expectation that the other will perform a particular action important to the one who trusts, irrespective of the ability to monitor or control the other party'. In general, we can state it as an expression of confidence. Past research has demonstrated positive relationship between psychological safety and innovation (Baer and Frese 2003; Huang and Jiang 2012). There has been positive relationship in terms of lower intentions to leave and improved mental health (May, Gilson and Harter 2004; Ulusoy et al. 2016). Owing to this, induction programmes can be instrumental in fostering the needed Socialization which would in turn lead to psychological safety. Therefore, we propose,

Proposition 2 *Socialization would lead to psychological safety of newly hired employees in an organization.*

46.2.3 *Organizational Learning*

Organizations learn on a daily basis. Research in the field of organizational learning has developed by viewing learning from multiple levels—individuals, group, organizational, and interorganizational. Irrespective of these, it is essential to capture the key insights which lie between these levels. It is because much of the learning is present in the everyday routine and system of the organization. Organizational level learning can impact the individual and group level learnings (Crossan et al. 1995).

There are two major mechanisms of learning which organizations generally use—‘Simplification’, i.e. learning process should look to simplify the experience, and ‘Specialisation’, i.e. learning process should focus upon a narrow competence. Departmentalization is an easy way to make actions more accountable; however, to make independent departments more cohesive, there needs to be sequential action towards the organizational goal which would demand a tightly coupled system. At the same time, there can be problems of fast and slow learning. If one unit adapts to a required change, the other may not even focus on learning (Levinthal and March 1993).

Let us consider this example—a car manufacturing company had a problem of quality among its products. There had been two massive recalls in a span of 3 years. Irrespective of changing the machinery, recruiting new staff, the necessary change was not happening. They decided to collaborate with another competitor which was good in quality management. However, the collaboration could not last long. Later, due to consistent failures, the Board sacked the CEO of the company. Over the period, the company was able to improvise better. Moreover, in a span of year, two new model designs were ready. How is it that just by the change of leadership this drastic change occurred? It is true that leadership plays a key role in ensuring the necessary change. It turned out that individual units were proficient in their areas, but they barely discussed their problems. The previous leadership pushed towards aggressive production and sales which did not give much space for key improvements. Moreover, because of the lower interaction, the defects used to show up either in the end or after they are pushed to the market. What the new leader did in this case, was he created forums for more discussion among the work units which allowed them to learn about each other’s actions more frequently. Those who learn faster can teach others and also slow learners can approach fast learners for better understanding.

There are three building blocks of learning stated by Garvin et al. (2008, p. 5)—(1) ‘Supportive Learning Environment’, (2) ‘Concrete Learning processes and practices’, (3) ‘Leadership that reinforces learning’. There are four features of a supportive learning.

Environment—‘*Psychological safety*’—employees do not feel the fear of being marginalized when there is any disagreement with their peers or authority. ‘*Appreciation of differences*’—learning happens when people know and respect each other’s opposing views. ‘*Openness to new ideas*’—learning is also about putting forward new approaches rather than only pointing to mistakes. ‘*Time for reflection*’—people need to be allowed proper time to reflect and review the organization’s process.

Learning process involves the generation, collection, interpretation, and dissemination of information, e.g. experimentation; intelligence gathering; technological trends. Knowledge can be shared in a systematic way by the following—1—internally focussed, e.g. taking corrective action measures like post-audits or reviews. 2—Externally focussed, e.g. timely forums with customers and subject-matter experts to gain perspectives on key activities and challenges.

It is evident from the building blocks that psychological safety is an important constituent towards organizational learning. As mentioned through the example, leaders also need to prompt dialogue and debate through the processes so that people feel encouraged to discuss.

Another example from the perspective of induction programmes can be, let us say a consulting firm has hired a few MBA graduates and is conducting an induction programme for them. As part of the session, there were some key speakers who came from the top leadership. During the session, they put forward some business case, which they might be facing in real. Any discussion, which happens here, is fruitful as the ideas that have been discussed are directly going to contribute towards senior management decision. Therefore, such programmes not only benefit the new recruits but can be beneficial for the leadership's learning. Hence, we posit that induction programmes would play a key role towards connecting the newly recruited employees among the work units and leadership which would further the organizational learning.

Proposition 3 *Induction programmes would lead to Socialization of newly recruited employees which would create psychological safety and then would lead to better organizational learning.*

46.2.4 Modes of Knowledge Creation

If the transmission is through the process of written handouts or documents, then it is explicit knowledge; however, if the learning happens through the process of discussions, interactions, then it is in tacit form. Tacit knowledge refers to that which we get to know during our normal day-to-day living, for instance—learning how to ride a bicycle (Polanyi 1962). That knowledge for which there is concrete know-how, for instance in this case—job role, description, specification, is explicit knowledge (Tsoukas 1996). A lot of learning that gets converted to individual knowledge during any informal conversation with the leadership or any other co-worker is tacit which is difficult to capture. In the dynamic theory of knowledge creation, Nonaka (1994) states four modes in which knowledge conversion happens (as shown in Fig. 46.1)—(1) tacit knowledge to tacit knowledge, (2) explicit to explicit knowledge, (3) tacit to explicit, (4) explicit to tacit. Tacit knowledge transfer is something which happens by mere observation and imitation. There is no requirement of any specific language. This would happen through shared experiences. Thus, 'Socialization' as a process plays a key role in creation of tacit knowledge. If the known expertise of individuals

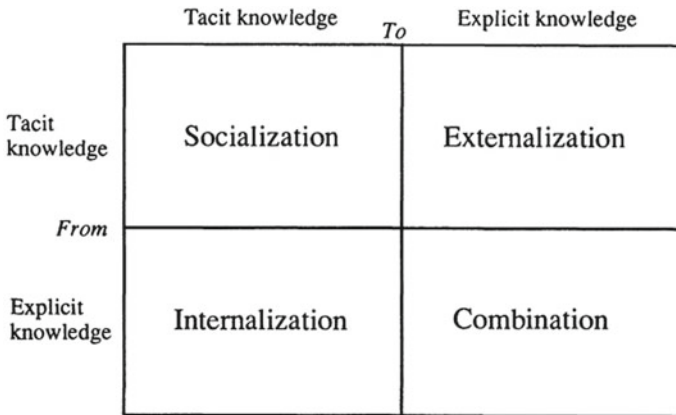


Fig. 46.1 Modes of knowledge creation (Nonaka 1994)

is brought in together to form some new knowledge, then it is called ‘combination’. E.g.—If individuals who are proficient in using R come together to make something out of their knowledge.

Transformation of tacit to explicit mode is called ‘externalisation’ and vice versa is called ‘internalization’. Externalization as a process happens in the form of ‘dialogues’ and then is documenting the key outcomes. When these outcomes are further discussed towards experimenting something new, then the process of ‘internalization’ takes place. Based on this literature, this study would like to propose

Proposition 4 *Organizational learning is a continuous process which happens through the various modes of knowledge creation facilitated by the organizational processes.*

46.3 Proposed Framework

This study would like to propose a framework on induction programme’s contribution towards organizational learning based on the key propositions mentioned above. In Fig. 46.2, the stages of induction programme fostering organizational learning are shown. Wanous and Reichers (2000) state that it is ideal for an induction programme to take place within the first month of joining of the new recruits. Moreover, for the programme to be effective, it should be designed to take place for few designated hours within the first week of new joining of employees. The design of the induction programme has to ensure the following—(1) new learning of employees. (2) Should give employees the opportunity to interact with each other as well as the organizational members. (3) Should provide some useful learning to new employees as well the management. (4) Should allow any new idea or information to get assimilated

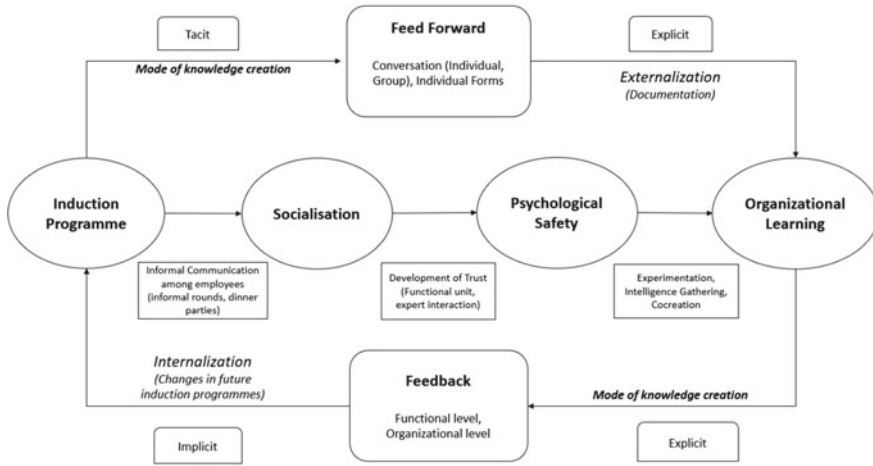


Fig. 46.2 Induction programme to organizational learning and knowledge creation framework

(feedforward). (5) Also, there has to be proper feedback mechanism wherein the employees as well as the management know their shortcomings.

Taking this idea, we suggest that the three levels of induction, i.e. macro, functional and micro, can be divided equally on a daily basis. Let us say the joining is on a Monday, so the first set of activities has to be related to macro-level discussion like organization’s vision, values, etc. Then, there has to be an informal round with some of the key people present in the management. Post-lunch session can be function-specific interaction and also visit to the work stations. In order to facilitate ‘socialization’, the informal gathering can be succeeded by a more outgoing informal gathering in the form of a dinner party. Such engagements would also foster the necessary relationships which would remove any possible insecurity, anxiety and ensure some initial psychological safety of the new employees. The next day can be again some leadership talk, informal session, and then informal gathering with the other co-workers. Through a continual process of Socialization, co-workers would come and interact about their expertise among themselves and also with the experts which will further the co-creation of learning from both the sides. Such co-creation would also facilitate a possible new project which denotes ‘combination’.

The whole process follows the conversion of tacit knowledge into explicit knowledge. Nonaka and Takeuchi (1995) suggest that only if individual knowledge is valuable, then only it would become worthy of being translated to organization level. Therefore, in order to capture the learning components, the process of feed forward and feedback has to be made explicit. As per the figure, this transformation of knowledge is happening first in the form of informal interactions then moving towards a formal interaction through the feed forward process of data collection which denotes ‘externalization’. This is done by the means of a form floated to the newly recruited employees as well as those management and leadership officials who interacted as

part of the programme. In the form, they must be asked to express their key learnings. It is preferable to keep the format descriptive because a lot of tacit components would come up while an individual writes down subjective matter. There are also high chances that people may not want to disclose their learnings and withhold from sharing information (Kang 2016). Therefore, there has to be a clear clause that the forms will be used solely for the purpose of organizational knowledge assimilation.

46.3.1 Evaluation of the Forms

The forms have to be collected and analyzed by the learning and development department. In the analysis, the information collected has to be classified based on individual and organizational level learnings. The individual level feedback would be carried out once the newly recruited employees join their functional units. Since the information was confidential, it is necessary to inform the newly recruited employees about the information and that the company acknowledges the same. The feedback must be carried out at supervisor level from the learning and development department. The information which has usefulness at organizational level must again follow 'externalization' and be collated and shared with the top management level. Once a dedicated top management team conducts meeting and discusses on the relevance of the information collected, there is always a possibility of some meaningful idea coming out from such discussion. The insights generated during such discussion would lead to 'internalization' of the knowledge which would be useful for the purpose of more meaningful experimentation in future induction programmes.

46.4 Discussion and Implications

This study proposes a framework to signify the process of organizational learning and knowledge creation through induction programme. Learning which happens during the course of induction programmes is limited due to its time bound nature. However, individual key learnings, collaborations can continually take place. To carry forward the learning that has happened during the course of induction programme, appropriate mentorship programmes could be useful. Mentoring as a process is a dyadic relationship that is formalized in organizational setting with focus towards learning experiences (Krantz 1989). A good mentoring relationship can be very useful for generative learning and can also be related to learning leaders (Argyris 1993). On a contrary, a bad mentoring relationship can become toxic if the relationships are not rightly set (Feldman 1999). Thus, having a buddy programme in the initial phase could help people know each other and set the right relationships later. We described about the individual level feedback which would take place later once the new recruits have joined in their respective roles. Based on the kind of ideas generated during the programmes, if the learning and development team could bring in an appropriate

mentor within the organization, it is highly likely that the ‘experimentation’ process of that particular idea could move forward towards a useful learning. E.g.—if an engineer newly recruited suggested some new learning on Robotics-based process improvements, then the L&D team could try to find a mentor who can work with this engineer and make turn the idea useful. Mentors should have regular check in and check out (CICO) with the mentee to understand the amount of knowledge gained. Some of the features of CICO which include setting the behavioural expectations, daily progress report, feedback, reinforcements based on behaviours can be used during the later mentorship programmes. (Klingbeil et al. 2019). It will help the organization to understand the impact/ROI of the induction programme.

Any learning-based engagement here needs to address these critically—(1) The objective of any such engagement should add value to organization’s long-term goal (2) The availability of right resources for making the ideas fruitful. Going by the notion of stakeholder influence, employees are the primary stakeholders of a company, who with their skills provide the right resources to attain the objectives. These resources include—access to information, network position, technology, service, and talent (Barnett et al.2020). Companies on the other hand can influence their employees by providing the right incentives and facilities towards accomplishing the said objectives. Thus, we posit that if the objectives of the induction programme are in place, then the involvement of the right employees in induction programmes could make a difference in formation of future collaborations.

Another important perspective showcasing managerial implications of induction programmes is the topic of ‘diversity’. Modern times allow people from diverse backgrounds to come together and work in teams. In a study conducted in context of school management on catering to diversity, the researchers had found that induction programmes need to be catered to individuals based on their capabilities because the learning needs of each individual vary (Robinson et al.2006). If we relate this to current organizations, especially in the IT sector, people might have been hired based on certain coding skills, but then, they might have come from various geographies, language, cultural backgrounds which may emphasize on the need for interpersonal training. Induction programme if planned based on the learning needs could foster greater results. Considering the presence of diversity among new recruits, induction programmes edge a greater responsibility towards making these recruits cohesive and function effectively. The framework developed opens up new avenues for further inquiry. Thus, in this manner, the study highlights the implications for managerial application.

46.5 Conclusion and Limitations

Organizations today must constantly learn. In addition to their learning, they also need to manage their knowledge repository which would allow them to retrieve necessary information when needed. The scope of this study is limited to theoretical framework. In future, this framework can be validated by further empirical research or

case analysis. The study builds its framework based on the literature focussed majorly around western context limiting its generalizability to other parts of the world. From the perspective of HRM professionals, an important action is to integrate induction programme with learning and development and knowledge management systems. Future studies can focus their attention on these lines and explore further.

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Chapter 47

We Feel Lonely, and in This, We Are Connected: Workplace Loneliness and Organizational Citizenship Behavior



Vaishali Jadon and Abhijeet Tewary

47.1 Introduction

“If you want to go fast, go alone. If you want to go far, go together.” African Proverb (Cacioppo and Patrick 2008, p. xv).

Homo sapiens are regarded as social animals, have communal needs, desire social reciprocity, and wish to preserve their close connection. When this requirement is not fulfilled, individuals may feel secluded or lonely (Weiss 1973).

Loneliness is an unpleasant feeling experienced when the person’s network of social relationships is significantly deficient in quality or quantity. Parallel to this view, Weiss (1973) claims that “loneliness can occur in the situations of not having enough social interaction or not having satisfying close relationships.”

Maslow (1954) said, “A sense of belonging and connectedness with others is fundamental to human functioning and well-being.” Establishing suitable workplace relationships will support employees in enhancing their psychological well-being (Mao 2006). Various difficulties in the workplace have been brought by the speedy economic development and social transformation that eventually increase workplace loneliness (WL) to differing degrees. WL is a prevalent emotion in existing personnel and has a lot of adverse impacts on workplace staff and organizations as one of the most widespread adverse feelings in the organization (Ozcelik and Barsade 2018; Peng et al. 2017; Chen et al. 2016). Emotional needs, which are the most real craving of humanity, have not been replaced; even though the unparalleled opportunities and

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dilemmas we experience, everyone may have faced loneliness. In this information age, loneliness has become more familiar because of the growing psychological distance among people (Wright 2005).

Social relationships are vital for personal as well as professional life (Wright 2012). We attempt to achieve a variety of desires or wants out of relationships, like a need for attachment (Bowlby 1973), belonging, affiliation (McClelland 1985), and social support (Lakey and Cohen 2000). Many studies focus on positive relationships at work. However, only a few focus on negative workplace relationships like WL (Lam and Lau 2012), even after knowing that all individuals spend most of their time at work (Ozcelik and Barsade 2018). WL is an unpleasant feeling experienced by an employee due to dissatisfactory social relationships (Lam and Lau 2012; Wright et al. 2006). It is also described as an employee's subjective affective evaluations of, and feelings about, whether their affiliation needs are being met by the people they work with and the organizations they work for (Ozcelik and Barsade 2018, p. 7).

Prior studies have focused on the advantages of constructive interpersonal relationships in the workplace. Comparatively, little consideration is dedicated to the influence of damaging relationships in the workplace. Inadequate "social connection" could have significant effects, which is a severe issue. Various studies across literature and field indicate that loneliness as a feeling is described as inadequate or unsatisfactory social relationships—yielding several types of ill effects, like depression, anxiety, heart failure, suicide, and mental disorder (Leary 1990; Stravynski and Boyer 2001; Heinrich and Gullone 2006; Cacioppo and Patrick 2008). Fewer studies are performed on the concept of loneliness in the workplace, whereas the psychological effects of loneliness are recorded well. Still, there are various evidence and reasons to consider the fact that the probability and length of loneliness might be more extensive at work compared to personal life (Reinking and Bell 1991; Dussault and Thibodeau 1997).

We concentrate on WL for two primary reasons. First, loneliness is a widespread concern at the organizational level (Ozcelik and Barsade 2018). At a personal level, loneliness indicates lousy health, stress, poor quality of life, and depressive symptoms (Hawkley and Cacioppo 2010; Theeke et al. 2012) and decreased well-being (Erdil and Ertosun 2011). Second, it will have severe consequences in the workplace. WL reduces the performance of an employee (Lam and Lau 2012; Ozcelik and Barsade 2018), employee commitment (Ertosun and Erdil 2012), creativity (Peng et al. 2017) and boosts their intentions of turnover (Ertosun and Erdil 2012). Additionally, the sense of becoming lonely puts down the cohesiveness among members of the group (Wright 2015). This gap is identified in the existing literature, and a growing need for research puts the stage for studies on this issue.

Drawing from past studies on loneliness (e.g., Peplau and Perlman 1982; Heinrich and Gullone 2006), social relationships and the social exchange model (Blau 1964; Cropanzano and Mitchell 2005; Shore et al. 2006; Coyle-Shapiro and Shore 2007). We propose that WL is negatively related to organizational citizenship behavior (OCB). This study will also examine the moderating impact of inclusive leadership.

The study will contribute to the literature in several ways. First, WL literature is majorly centered on antecedents of workplace loneliness that too personality-based antecedents only. Studies that have given attention to the consequences of WL have only focused on psychological well-being-related outcomes like burnout, emotional exhaustion, and stress. Performance-related outcomes that are studied include job dissatisfaction, job performance, turnover intention, and creativity. This study will be among a few which will focus on OCB as an outcome of WL. Second, this study will analyze affective organizational commitment (AOC) from the lens of WL. We will use AOC to mediate the relationship between WL and OCB. There are very few studies that have examined this relationship. Third, transformational leadership and leader–member exchange (LMX) are the most studied leadership technique in the literature. Inclusive leadership will be the lens through which WL will be analyzed in this study.

47.2 Theoretical Background and Hypotheses

47.2.1 *Workplace Loneliness (WL)*

According to Rook (1984), loneliness is defined as an “individual’s feeling of being distant or removed from others, reflecting a negative psychological mood.” As seen in earlier studies, loneliness and WL are not the same. According to the definition of workplace loneliness (WL), it is “an emotional state that occurs when the quality of interactions and communication in an organisational environment is lower than desired, and it is primarily defined as being left alone and isolated by the lonely individual’s social environment” (for example, co-workers or managers) (Wright et al. 2006). The literature has distinguished between “good” and “negative” loneliness. Positive loneliness is defined as “the intentional withdrawal of people from their difficulties, whereas negative loneliness is associated to unhappiness brought on by people’s relationships with their environment being subpar in comparison to expectations”. The 1982 Perlman and Peplau claim that loneliness is “something other than being alone” which seems essential at the moment. WL is typically examined in terms of two dimensions: “social companionship” and “emotional deprivation” (Weiss 1973; Wright et al. 2006). Emotional deprivation is defined as “the disappearance of people’s emotional attachments to others; it also refers to the die-out, as a result of death or divorce, of relationships that can be described as vital in human life” (Weiss 1973; Wright et al. 2006). Employees who identify as “emotionally deprived” refrain from sharing their own thoughts and feelings with others, strive to distance

themselves from their own co-workers, and think that no one will recognize their issue or sympathize with them (Wright 2005). The “social companionship dimension” concerns workers missing out on company social events, including birthday parties, dinners, funerals, and social networks at work (Weiss 1973). When “social companionship” is lacking, which can also be referred to as “social loneliness” or a lack of a “social network” (Weiss 1973; Wright et al. 2006), humans struggle to imagine themselves as belonging to a social setting or group. Workers in these circumstances are considered to be alone and excluded from everyone.

47.2.2 Loneliness: Overlap with Related Constructs

The “loneliness” as a concept gets confused because of its incremental validity with the related concepts like “solitude,” “isolation,” “depression,” “aleness,” “ostracism,” and “alienation.”

Solitude

It is a “delightful, self-fulfilling and revitalizing event which is preferred freely by people” (Wright et al. 2006). At the same time, loneliness is imposed on individuals and is commonly realized as an adverse emotional situation many people try to keep themselves away from.

Isolation

Although “isolation” is the most significant reason for loneliness, they are not identical (Ernst and Cacioppo 1999). Isolation refers to “detachment from others which can be voluntary or involuntary.” Aloofness from “social contacts” and limited “social interactions” is isolation. Whereas loneliness is supposedly imposed on people, the quality of social exchanges is the focus, not the quantity. A person can feel isolated with no loneliness and feel lonely with no feeling of isolation.

Aloneness

It is a desirable social experience exercised by an individual to demonstrate self-sufficiency. Responses of people to aloneness can vary, and it could stretch from a feeling of happiness to a sense of loneliness (Burger 1995). It usually implies a feeling of being alone instead of being distant from everyone else (Wright et al. 2006). In contrast, loneliness, explained previously, is described as an unwanted social reality resulting from unsatisfied emotional and social needs.

Alienation

In contrast to loneliness, it is described as cultural, social, or self-estrangement. It is associated with feelings of powerlessness, meaninglessness, and normlessness (Bell 1985), even though it is distinct from loneliness. However, undesired and unwelcomed alienation can give rise to the feeling of loneliness in individuals (Wright et al. 2006).

Depression

Depression can occur due to constant loneliness. We can feel lonely but not feel depressed and can feel depressed but not lonely (Peplau 1988). Depression is a mood disorder that occurs when an individual gives up or surrenders to deal with it. At the same time, loneliness is more specific and results from a lack of needed or specific relationships. Loneliness leads people to locate the right people to socialize with, whereas it is a condition exhibited by vulnerability and helplessness.

Ostracism

A condition where an individual feels they are being ignored and excluded. It can happen with no specific adverse consideration or unnecessary justification (Williams 2007). If compared with ostracism, much more period to heal is required from the injury that employees get because of ostracism (Wesselmann et al. 2012).

47.2.3 Social Exchange Theory (SET)

In the later 1950s, social exchange theory (SET) became prevalent, which was a part of micro-study behavior of humans using sociological, psychological, and economic concepts (Homans 1958). SET talks about the reciprocity of interests, which means that one party provides help and support to the other party so that the other party has an obligation to return but does not know whether or when the other party will return, so this kind of exchange.

A relationship has uncertainties and risks (Blau 1986). The inherent requirement of the process of social exchange is when both parties realize reciprocal benefit because of the exchange of resources that are their own and unique; the foundation of this exchange is interdependence and self-interest (Lawler and Thye 1999; Cook et al. 2013). The institution of an employee-organization association refers to the fact that the workforce will exchange their personal labor for incentives or rewards, and employees will exchange their loyalty to the organization for its support and care. Alternatively, because of workers' performance, the company holds more considerable development of the interdependent relationship between employees and the organization in forming a social exchange relationship (Rhoades and Eisenberger 2002). The reciprocity principle is the premise of SET. It asserts that to develop a norm of social exchange, one party must provide help and support to the other party in the form of giving resources, then the obligation of repayment by the party receiving help is created, and this leads to the exchange process. The framework for this study is developed on SET. We hypothesize that lonely employees need to receive the required number of social relationships and care from the organization and co-workers, so it impacts their citizenship behavior.

47.2.4 Workplace Loneliness and Organizational Citizenship Behavior (OCB)

The “social exchange model” is often used to analyze the relationships between employees and their organizations (Blau 1986; Coleman 1988; Tsui et al. 1997; Shore et al. 2006; Coyle-Shapiro and Shore 2007). Due to the norm of reciprocity, people are inclined to persevere in long-term trusting and loyal interpersonal relationships with unspecified obligations, as opposed to short-term and arms-length exchanges that are more transactional than relational (Cropanzano and Mitchell 2005). The social exchange perspective has been shown to help analyze employees’ willingness to contribute above and beyond what is required by the organizations (Wayne et al. 1997; Masterson et al. 2000; Cropanzano et al. 2002; Aselage and Eisenberger 2003). One classic proposition of the social exchange model is that “if organizations are willing to provide valuable resources such as training and care, employees will reciprocate through effort and commitment to help the organizations achieve their goals in terms of in-role performance and citizenship behavior” (Aselage and Eisenberger 2003). When employees enter into social exchange relationships with their organizations, they are likely to undertake actions that are conducive to the goals of the organization (Eisenberger et al. 1986; Eisenberger et al. 2001).

Because lonely employees lack social exchange relationships with their organizations, they may spend less effort achieving organizational goals than their non-lonely counterparts. They are thus less likely to perform well in their jobs. Employees who establish social exchange relationships with their employers develop a higher sense of obligation to the organization in terms of extra effort, commitment, and willingness to sacrifice (Rousseau 1990; Shore and Barksdale 1998). In this case, employees are likely to offer more to their employers than their employment contracts require. Shore et al. (2006) found that social exchange is associated with higher levels of job performance and citizenship behavior. Accordingly, we hypothesize the following due to a lack of social exchange.

H1: Workplace loneliness is negatively related to organizational citizenship behavior.

47.2.5 The Mediating Role of Affective Organizational Commitment

“Affective commitment” (AC) can be said the strength of an individual’s attachment to an organization (Meyer and Allen 1984). Dyne and Ang (1998) explained that “attachment typically develops out of frequent and repeated exchanges that make an ongoing relationship possible.” AC is affected by employees’ assessments of the support they receive from their organizations. When the employees believe they are handled well by their organization, they reciprocate and surpass the bare minimum needs of their job by helping others and the organization (Konovsky and

Pugh 1994). Thus, in this sense of “psychological attachment, affective commitment can be viewed as an antecedent of OCB.” Shore and Wayne (1993) noted that “there is a relationship between affective commitment and supervisor rating of OCB.” A similar finding is also reported by Organ and Ryan (1995). The relationship between organizational commitment and OCB has been also documented by Meyer et al. (2002). Their research found that among the three dimensions of commitment (i.e., affective, normative, and continuance), affective commitment has the strongest positive correlation with the citizenship behavior, followed by normative commitment.

As suggested by the “regulatory loop model of loneliness (Cacioppo and Hawkey 2009), the cycle of negative social interactions experienced by lonelier employees will fuel their sense that their work environment is not meeting their relational needs.” This appraisal, according to the “affect theory of social exchange (Lawler et al. 2008), will lead lonelier employees to attribute their negative feelings to their overall organization; thus, the impaired social exchange relationship between an employee and his or her organization relates to a withdrawal of support and effort from the employee” (Van Dyne et al. 1994). Employees with a less affective commitment to the organization have been shown to undertake fewer extra-role duties and to have greater absenteeism and turnover (Hackett et al. 1994; Meyer et al. 2002). Especially important for our prediction, they have also been found to involve in lower levels of organizational citizenship behavior. Williams and Anderson (1991) proposed that job satisfaction and organizational commitment are related to OCB. Indeed, in a meta-analytic review of the influence of commitment on work outcomes, Meyer et al. (2002) determined that of all types of commitment, affective commitment to the organization had the most consistent and significant relationship with employees’ job performance. Accordingly, we hypothesize:

- H2:** Workplace loneliness is negatively related to affective organizational commitment.
- H3:** Affective organizational commitment is positively related to organizational citizenship behavior.

47.2.6 The Moderating Impact of Inclusive Leadership (IL)

The term “inclusiveness” in leadership research was first coined by Nembhard and Edmondson (2006). According to them, “inclusive leadership refers to actions exhibited by leaders that appreciate followers’ contributions and that a leader values others’ uniqueness by helping group members to overcome the inhibiting effects of status differences, allowing members to collaborate in process improvement” (Nembhard and Edmondson 2006, p. 941). IL enables establishing an environment that subordinates are of the same status and are not discriminated based on “out-group members” and “in-group members” (Nishii 2013). Inclusivity in the group will lessen the workers’ opinion of being disregarded, ignored, rejected, and excluded in the workplace. A human being who wants to belong has an evolutionary basis, and

a longing to be involved would have both “survival” and “reproductive benefits”. When a supervisor satisfies the personnel’s responsibility by lowering the alleged risk of exclusion, workers will react positively in return. As the IL shifts from low to moderate levels, the personnel understands that their supervisors are offering further benefits. As a result, they will feel obligated to reciprocate positively, triggering more task performance.

Therefore, with the support of an inclusive leader, lonely employees’ affective commitment to an organization will increase. On the lines of SET, when an employee starts feeling that he is receiving the required amount of support and inclusion in the form of an inclusive leader, he will start developing affective commitment toward the organization as a reciprocity of social exchange. Employees who feel lonely may need to be more motivated and effectively committed to an organization. However, as an inclusive leader will provide enough support to an employee, he will be motivated enough to involve in affective organizational commitment.

H4: Inclusive leadership will moderate the relationship between workplace loneliness and affective organizational commitment, such that with an increase in inclusive leadership, employees feeling lonely will develop affective commitment toward an organization.

47.3 Conceptual Framework

See Fig. 47.1.



Fig. 47.1 Conceptual framework

47.4 Methods

47.4.1 Respondents and Process

Convenience sampling will be used to collect data from different Indian firms. A questionnaire will be administered online to the employees. We will contact the workers of the firm prior to the study to notify them about the purpose and process of our study. Consent will be taken from the participants before the study. Participants will be informed that their participation in this study is entirely voluntary and that they can drop out of the survey anytime. Participants who will be ready to participate will be considered for the study. To obtain valid and compelling data, we will adopt a two-stage survey. Workplace loneliness and affective organizational commitment will be collected in time 1, and inclusive leadership and organizational citizenship behavior will be collected in time 2.

47.4.2 Measures

Workplace Loneliness (WL)

We will use Wright et al. (2006) scale to measure the WL of employees consisting of two dimensions: emotional deprivation and social companionship. We are using both dimensions of workplace loneliness for our study. The scale consists of 14 items. A 7-point Likert scale will be used where 1 = “strongly disagree” and 7 = “strongly agrees.”

Affective Organizational Commitment

We will use Allen and Meyer’s (1990) scale to measure affective organizational commitment to the organization. The scale consists of six items. A 7-point Likert scale will be used where 1 = “strongly disagree” and 7 = “strongly agrees.”

Organizational Citizenship Behavior

We will use Williams and Anderson’s (1991) scale to measure organizational citizenship behavior. The scale consists of six items. A 7-point Likert scale will be used where 1 = “strongly disagree” and 7 = “strongly agrees.”

Inclusive Leadership

Pless and Maak (2004) is a 6-item scale, and we will use a 7-point Likert scale for the study where 1 = “strongly disagree” and 7 = “strongly agrees.”

47.5 Implications

The current study helps us demonstrate the importance of the psychological well-being of employees at work. An adverse psychological state reduces the overall performance of the firm as well as the performance of an employee. Supervisors, policymakers, and organizations should study various problems impacting the workers' mentality. The HRM system of an organization should be improved because it is vital in avoiding WL and positively impacts workers' psychological well-being. An organization should provide training and practices to their employees, further improving the corporation, social ties, and collaboration among workers. The performance of workers and the organization will be improved if the HR system of an organization thinks about the issues like WL (Bienkowska and Ignacek-Kuznicka 2019; Sikyr 2013). Events like social get together, weekly meetings, and monthly dinner parties will bring out people close to each other. Therefore, organizations and policymakers should take precautions to avert the negative cost of loneliness as well as there should be stringent checks on those preventive methods.

The WL domain is still nascent, and this current study adds to the evolving research domain of WL by developing a theoretical perspective linking WL affective organizational commitment and organizational citizenship behavior. WL is considered a taboo that workers face in an organization, that has been neglected both empirically and theoretically. There is an inherent assumption that employees will mold themselves into the social fabric of organizations. From the literature on socialization and person–environment fit, this belief only holds sometimes, and employees may consider themselves alone or left out even after having informal social networks in an organization (Cooper-Thomas and Wright 2013). The studies building a foundation for WL are vital as they inform the antecedents and consequences of this phenomenon and give us some methods to conquer this feeling of WL in an organization. We hope that carrying out this study on WL will help several employees as it will provide a voice for them. Moreover, organizations will improve employees' lives in terms of material, interpersonal, and social improvements.

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Part X
Inclusive Workplaces

Chapter 48

Denial, Resilience, Resignation or Acceptance—What Leads to Career Success? A Post-intentional Phenomenological Study Among Indian Women



Payal Mukherjee

48.1 Introduction

Career success has been defined as the subjective measure of perceptions of employees about their overall career goals, income goals and advancement in career (Greenhaus et al. 1990). Studies in the Western world on women's careers and career success reveal that job-specific attributes influenced more the career success of men, whereas women's achievements were obtained more through job-relevant merits, career-move decisions and organizational and occupational opportunities (Melamed 1996). In cultures which are male dominated, women's careers are likely to be affected adversely (Rowley and Bae 2004). Studies on career success of women in Asian countries are few (Cho et al. 2019; Bu and Roy 2005; Rowley et al. 2016). In the Indian context, some recent research shows that organizational support positively influences subjective career success (Agrawal and Singh 2021), mentoring, organizational support as well as family responsibilities impacted the perceived career success of women (Chauhan et al. 2022) and that occupational self-efficacy, proactive personality, work role salience and gender role attitude affected career success in women (Kang and Kaur 2020).

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While studies on glass ceiling (Harlan 2008) and research on its effect on women's careers have been very extensive, even in India (Nath 2000; Jain and Mukherji 2010; Shanmugam 2017; Srinivasan et al. 2013; Yukongdi and Benson 2005; Yadav and Khanna 2014), the more recent concept of 'glass ceiling beliefs' is still uncommon. In 2012, Smith, Caputi & Crittenden developed a Career Pathways Survey (CPS) which yielded a four-factor model of attitudes to glass ceilings or what they call glass ceiling beliefs: denial, resilience, resignation and acceptance. Multiple studies have linked resilience to career success (Salisu et al. 2020; Ahmad et al. 2019; Yu et al. 2022; Carstens et al. 2021), but very few have tried to study the effect of all four of these factors on career success where they have been found to be the antecedents of women's subjective career success (Fathy and Youssif 2020; Roman 2017). Indian studies on glass ceiling beliefs have been done on their connection to work engagement and burnout (Balasubramanian and Lathabhavan 2017) and performance and turnover intention (Lathabhavan, 2019) but none on career success.

48.2 Theoretical Background

The four factors of glass ceiling beliefs are denial, resilience, resignation and acceptance (Smith et al. 2012a, b). *Denial* is defined as the belief that men and women face the same issues and problems in seeking leadership. *Resilience* is the attitude that women are able to break glass ceilings. *Resignation* is the belief that women suffer many more negative consequences than men when pursuing career advancement, so women should not attempt to break glass ceilings. *Acceptance* is the belief that women prefer other life goals, such as family, over career (pro-family and anti-career). So, while resilience and denial were optimistic as they say that women can attain top positions in organizations, resignation and acceptance show pessimism as they imply that women do not have leadership goals, and hence, there is a gender imbalance in leadership. Glass ceiling beliefs can become antecedents of subjective career success variables which are affected by optimistic or pessimistic thoughts. Smith (2012) found that denial was positively associated with career satisfaction and work engagement; resignation was negatively related to happiness, emotional well-being and physical health; resilience had positive relationships with happiness and work engagement; and acceptance was negatively related to work engagement.

In the traditional linear career model, it was relatively easier to measure career success, by salary, increase of salary or position and promotion (Heslin 2005; Judge et al. 1995; Ng et al. 2005). Objective career success is the external perception of success and includes income, promotion, hierarchy, satisfaction with career progression (Van Maanen 1977, Hughes 1958) and is directly observable, measurable and verifiable by an impartial third party (Hughes 1937). Career models have changed with time, with traditional linear models giving way to others, like protean and boundaryless careers (Briscoe et al. 2006; Arthur and Rousseau 2001; Hall 2004) or Kaleidoscope careers, making way for employees to achieve more than objective career success. Subjective career success is more difficult to measure and is defined

by one's reactions to his or her unfolding career experiences (Hughes 1937; Heslin 2003, 2005) or by the individual's definition of career success, i.e., job satisfaction, self-awareness, adaptability and learning (Gunz and Heslin 2005). Subjective and objective career successes are interdependent (Hall and Chandler 2005; Abele et al. 2011).

Role theory (Eagly and Wood 1991) assumes that gender role expectations affect the behavior of men and women in social situations. For example, males are thought to be more competent than females (Correll 2004), especially in the workplace. Women are expected to have high communal attributes like friendly, concerned, emotionally expressive, while men are expected to have high level of agentic qualities like being independent, assertive, instrumentally competitive. Women seek more secure career orientation than men (Dolan et al. 2011) and seeks work–family balance (Dolan et al. 2011; Magid and Chidambaram 1997). In objective career success parameters, women get paid less (Evers and Sieverding 2014) and have more obstacles to promotion (Buckley et al. 2000). Even when women get promotions, it is not accompanied by the same increases in level or compensation as men (Eddleston and Baldrige 2004). Women perceive less favorable prospects for career advancement than men which lead to their lack of desire for promotion (Litzky and Greenhaus 2007). Thus, the subjective and objective career successes of women should be affected by these assumptions or perceptions which come with gender role expectations.

Organization support as well as family support provided subjective career success (Agrawal and Singh 2021). A Korean study showed that women in traditional career models experienced difficulties in their career success, but did better in boundary-less career models (Rowley et al. 2016). The few studies done in India on women's career success show that women's career success has depended on thinking positively, working proactively, being unconstrained by situations (Premchandran and Priyadarshi 2018), marital status (Agrawal and Singh 2021), supportive family environment (Valk and Srinivasan 2011) and supportive organization culture and climate including the diversity initiatives (Valk and Srinivasan 2011; Yaghi 2018; Kundu and Mor 2017). With the new nonlinear career models, women have been achieved more success than before, but still gender role expectations and gender stereotypes form a major part in the framing of glass ceiling belief in women (Smith et al. 2012a, b).

Glass ceiling beliefs affect career satisfaction for people with feminine traits (Blessie and Supriya 2018) and predict work engagement and burnout (Balasubramanian and Lathabhavan 2017) and even influence their quit intention (Roman 2017). In fact, various types of leadership also have their effects on women's glass ceiling beliefs (Mohammadkhani and Gholamzadeh 2016). It has also been found that denial and resilience are related positively to work engagement and performance and negatively to turnover intention, while resignation and acceptance are related negatively to work engagement and performance and positively to turnover intention (Lathabhavan 2019). Resilience in women leads to career satisfaction (Bush 2020). If glass ceiling beliefs are present in most women (Smith et al. 2012a, b), then how women perceive their own glass ceiling beliefs and how it ends up affecting their work lives and success is worth studying.

How women see their own glass ceiling beliefs is not a widely researched topic worldwide, and not existent in the Indian women's leadership literature. This paper looks at glass ceiling beliefs from the point of view of women in very senior or board level positions in Indian companies and links it to both their subjective and objective career successes. If a woman enjoys low objective or subjective career success, this paper also creates a model, wherein women can take steps to counter this trend in their careers and move toward higher success.

48.3 Method

This paper is part of a larger study of women's voice in the workplace. My qualitative research uses post-intentional phenomenology (Vagle 2018) and studies women's lived experience with glass ceiling beliefs and interpretation of their own career success. Post-intentional phenomenology which goes beyond 'intentionality' [the mind's relationship with the object of its consciousness (Husserl 1999)] does not use bracketing, which provides unique opportunities to play with disparate philosophies, theories and methodologies (Vagle and Hofsess 2016). Using post-intentional phenomenology allows me to examine the phenomenon in light of other social theories like role theory.

The steps of post-intentional phenomenology include identifying a post-intentional phenomenon in context around a social issue. Here, the phenomenon is women's glass ceiling beliefs and the effect on their career success. The second step was to devise a process for gathering phenomenological material which was done by semi-structured interviews based on a questionnaire. The third step was to make a post-intentional or a bridling journal (Vagle 2009) where I kept all my notes as well as personal observations. Fourthly, Vagle (2018) advises a complete line-by-line reading of the transcribed interviews and field notes. For data analysis, I used Vagle's (2010, 2018) prescribed steps.

48.3.1 Participants and Recruitment

The sample for the study was 46 female participants. Purposive and snowball sampling was used for this study. Their ages ranged from 32 to 48 at the time of data collection. All but five of the participants were post-graduates. Majority of the participants were from the financial services industry, comprising 16 out of the 46. My participants were from social, education, media, automotive, real estate, logistics, banking and financial services. The designations of the women were middle management to senior management levels.

48.3.2 Data Collection, Analysis and Trustworthiness

Interviews were conducted at a location most comfortable and convenient for the participant. Consent was taken from the participants for the interview to be recorded and used with complete confidentiality. First, a set of demographical questions were asked. Semi-structured interviews were then conducted. Participants were asked to recall instances where they believed they have been discriminated against by dint of being a woman. Questions which tested the participant’s glass ceiling belief: “Do you think your organization discriminates in terms of gender?” or “Have you ever been discriminated against?” or “Have you ever been passed over for a promotion just because you were a woman?” Follow up, open-ended questions were asked to encourage the women to speak more on their experiences. The next set of questions is related to their career success. All participants were asked about data regarding their salary and designation and if they were happy with these. They were also asked about their job responsibilities, their relationship with their co-workers and seniors, their overall work–life balance.

Each interview lasted between 30 and 60 min. I was the sole data collector. Interviews were transcribed verbatim and analyzed using thematic analysis as prescribed by Creswell (2014), and the primary data from the interviews and field notes were coded and analyzed using Atlas TI software. I used quotes from the participants and bridling journal, to provide texture and description. Then, I went through and reflected on the descriptions and created a structure of the participants experience constructing meanings and essences of the experience. Validation by cross-checking with the participants using Lincoln and Guba’s (1985) guidelines was done.

The objective of analysis was to check participants’ glass ceiling beliefs and how they defined their career success. The primary codes fell neatly under four categories corresponding to the four factors of CPS—denial, resilience, resignation and acceptance. I used further data to check what each woman reported to be their success level. I coded this section as subjective success or objective success. Thus, all 46 participants had their comments into two types of codes: (a) their glass ceiling beliefs and (b) their career success.

Table: Coding schema

First set of codes	Categories	Second set of codes	Categories of career success
Glass ceiling beliefs	Denial	Career success	High objective
	Resilience		Low objective
	Resignation		High subjective
	Acceptance		Low subjective

For example, the quote “*It is not gender that is stopping anyone from getting the promotion. Man or woman, if they are capable, they are treated the same way*” was coded as denial since it denies the presence of discrimination because of being a woman. The same participant also reported a high salary and regular promotions.

This showed high objective career success. This allowed me to check the type of glass ceiling belief and the corresponding type of career success that the participant reported.

48.4 Results

Analysis of the qualitative data from my interviews shows that in senior Indian women, the four factors of glass ceiling beliefs can be the antecedents of subjective and objective career successes which is consistent with Smith et al. (2012a, b) and other findings in literature. I categorically divided the comments on the four factors which I explain below with comments from my participants.

48.4.1 Glass Ceiling Belief Category—Denial

Participants reported having a sense of ‘denial’ as defined by Smith et al. (2012a, b) as the belief that men and women face the same issues in seeking leadership. Many participants reported not having been subject to gender-based discrimination in the course of their career. They said quite vehemently that gender did not matter in their organization or reported their organization to be women friendly in their practices, having paid maternity leave, flexible timings and work from home options

The group head does not care, man or woman; if you are on track with your work, you will get ahead. Senior VP, Bank

It is not gender that is stopping anyone from getting the promotion. Man or woman, if they are capable, they are treated the same way.—HR Head, IT company

A number of my participants were themselves senior Human Resources personnel, or in leadership (mentoring) positions themselves, and they said that they followed diversity and inclusion practices, so that women could come up the ladder

It is mandatory to have a certain number of female employees in a team. They have flexible pay and work hours. They are given a mentor, to hand-hold them and see what are the areas of strength.—Risk Head, Bank

A large number of participants made a comment which was a variation of: *“I know there is a glass ceiling, but I have not faced it.”*

Thus, the denial of the presence of a glass ceiling or the belief that they have the same chances as men in their workplace was presented in this category.

48.4.2 Career Success

Counterintuitively, my study shows that women in the denial category reported both subjective and objective career successes.

Subjective career success was measured by their report of being satisfied with their career and having positive work engagement

All the changes I have brought in is because I was empowered to do that. My manager would never take a decision without consulting me. I feel very trusted.—Producer, Media Company

Objective career success was measured by their having risen to senior positions in their organizations, being happy with their remuneration, and having great rapport with their seniors

When I joined back, not only did I get the position I asked for, they actually paid me more than I was expecting.—HR Head, IT company

I have got full support from leadership till date. My bosses and super bosses are outstanding. Even if you are wrong there is a way they will say it. You know it's not a personal attack.—Sr VP, Bank

48.4.3 Glass Ceiling Belief Category—Resilience

Women who showed 'resilience' are defined by the CPS as the attitude that women are able to break glass ceilings. These ladies recognized the glass ceiling and fought against the system. They reported that while discrimination was not rampant or apparent, there were factors which made them uncomfortable, like absence of a support system for new mothers, or lack of voicing mechanism for women. They talked about hidden discrimination and benevolent sexism. At the same time, they realized that they had to move forward and get things done

Women can succeed and do well, it depends on the choices we make. Look at me, I am completely satisfied.—Marketing Head, Media Group

I thought I should be promoted but I didn't. I waited for 6 months, then walked up to head of HR. You need to ask and you will surely get there.—HR Head, IT Company

In one case, the participant could herself pinpoint how women get affected by discrimination and end up moving out or checking out of their careers. When she came back from maternity leave, she was discriminated against by being given a lesser role than she had before. She spoke up and got the situation corrected for herself, but other women in her organization were not so lucky

The company maternity policy is very vague. I was just asking for corrective action to be taken for this particular instance. In our case, it was addressed. Other women who work in operations have not been heard, leading to women just quitting on the way.—Sr VP, Finance company

Some participants thought that women shortchange themselves by not speaking up in the workplace and thought that women should step up, not fearing about the consequences

Sometimes we think we are being extra sensitive and we will be blamed for it. How will we take the hard step if we keep thinking so?—Doctor

48.4.3.1 Career Success

This category of participants also reported both subjective and objective career successes.

In terms of objective success, the participants in this group were all in levels of seniority and had received pay hikes and promotion in terms of designation at a regular basis. They were all in leadership positions and many were mentoring other women in their organizations. Some of them were leaders of diversity and inclusion programs, as well as women's networks in their organizations

I am leading women's issues globally. Talking about ally-ship, a concept of power and privileges. I've been doing it for so many years, being an ally is a lifelong journey.—HR Head, IT company

They had subjective career success as they were happy with their overall work-life balance, they had job satisfaction and they were proud of where they had reached after their struggle

There are ways to have these conversations so that they don't become personal attacks

But we are not taught these things. I understood on my own, so I succeeded.—Doctor

I have been through a lot to reach where I am today. I know what it takes to navigate these corridors and so today I mentor women in my team to come up the curve and be ambitious. My door is always open to them.—Co-founder, Media

They can't handle women telling them what to do. There is a resistance I faced. I did not reach where I am today by staying silent and taking things quietly.—Marketing head, IT company

Invest time in upskilling and development. I had taken it up as a challenge after being dumbed down many times. We prefer to invest our time on kids and house, it's worth investing in self-development. Women have to be more ambitious.—VP Sales, IT company

48.4.4 Glass Ceiling Belief Category—Resignation

Women who showed 'resignation' have the belief that women suffer many more negative consequences than men when pursuing career advancement, so women should not attempt to break glass ceilings. They give up trying to fight the system. Some of them have been through a lot of difficult times trying to fight before they finally stop caring

I have been labelled throughout my career in the organisation. I don't think it is something you can change. It happens to all the women they hire in a male-centric job.—VP, Bank

This late-working culture is rampant. Women continue to face it; hence you are not promoted, you are not given growth or the plum role. What can I as one individual do about it.—Sales lead, IT company

One of my bosses, he is a man's man. He does not like being around women. He does not even like listening to women. He thinks women are emotional. It is looked at as a real weakness. I cannot do anything to fight that attitude anymore.—Department head, Hospital

This guy told the trainer 'why have you put me to a lady team leader'. I just walked away from there.—Marketing head, Logistics company

Some participants believed that the reason their organizations and co-workers discriminated against women was because the culture of the organization did not discourage it. Things like having less or no women in leadership positions, not having women's networks or specific programs targeted for women to do better affected both the culture of the organization and the morale of women employees

Only 1/2% top leadership is held by women. You keep losing them. I think the genesis of this problem is that the time to build career and family are same. Unless the organisation and work which you do is so material that it incentivizes you to choose your job, you give it up.—Sr VP, Bank

Career path progression, the chance to do something different or new, a job change- it does not come to women because they don't network. All day long you're consumed in work and the moment you finish there is home and kids. As a woman this has restricted my boundaries. I miss out because I don't like to waste time on that.—Manager Fundraising, Social sector

48.4.4.1 Career Success

Women who showed 'resignation' were also at high positions in their organizations and were being paid at par with their experience level, but they had low job satisfaction, emotional well-being or work engagement. So, while they had high objective career success, they had low subjective career success

This is a manufacturing company- traditionally male oriented. Maybe in a certain milieu I may not have the knowledge of a certain thing so I rather keep quiet. It makes me feel small.—Head, Marketing and Communication, Automotive

My boss was very powerful. He could make or break my career. This is not something I could play with and it gave me months of heartache.—Marketing Head, Media

Often the reason that they gave up was because their token status made them vulnerable and more afraid of backlash

Every time I was up for promotion, someone from sales would get it, I would invariably get low ranking. So, a man would get promotion in 3 years, I in 4.5- 5 years. I was the only woman in the team. What could I do?—Services head, IT

Payment business may have more women, but in loans, it is male dominated. It is much more difficult to break the glass ceiling.—Branch manager, Bank

I am the only woman in the sales senior team. I am the only woman in Bangalore, and in entire India there are 3 women heading a circle. In such a scenario, women have more difficulty proving they are right.—Sales regional head, IT

Sales department are male dominated, they want a typical attitude of abuse and screaming at team. Seriously, I don't want to part of that.—Sales Manager, Bank

48.4.4.2 Resignation: The Case of Binny (Name Changed)

Binny works in a very large private sector Indian Bank in the marketing division as a Vice President. She is a single mother to an adopted daughter. She recently moved to India from Australia, to adopt and settle down in Mumbai.

When she joined private banking in India five years back, she found that the mindset or culture was sales driven. The bank had hired her to bring in a change in the culture. She found the environment intimidating. She felt that there was a general consensus among her team mates that since she had been hired by the group head, they had to be careful around her. To her, they seemed to be thinking that since she was a woman *“there must be some other reason she is here.”*

Bridling Journal entry: the disappointment and sadness seem to emanate out of her. her every word when it comes to her workplace is fraught with hopelessness. The only bright

spark I notice is when she talks of her daughter and when she talks of senior leaders in the organisation. She currently prioritizes her daughter but she does not do that by choice alone. She is frustrated by the way she has been treated and seeks solace from her personal life. So, her professional life has driven her to prioritize her personal life rather than the other way around. We usually think that a woman chooses home over career, but is it always so black and white?

Since the adoption, she reprioritized her career in her own head. There is both a feeling of guilt and a feeling of frustration that she has to do what she has to do

This is no longer going to be a fruitful career. It is not going to give me that growth as a person so I need to create growth somewhere else in my life. My child is more important, this is something now I am just going to use to pay my bills

On top of that she has a fear of backlash from her immediate seniors who were all men

I was afraid they would just eat me up

She also finds the present system flawed. There may be committees like POSH, but the biggest problems are at branch level. Top management is not a problem as far as she is concerned. In fact, talking about the top management makes her smile.

I would be at my happiest and my best with these people. Because I had these little projects, I have stayed in the organisation

She suffers from self-doubt and fear of failure. In fact, the negative aspect takes over whenever she talks of this project. She seems to have given up altogether

They had hired me to bring a change to the culture, I was too junior to bring the change, maybe I was not strong enough

I was given a task which I would definitely fail at, I was not at right level to do it

She does not seem to pursue this with much tenacity. She resigns herself to failure. However, she does think that she has the technical expertise that even her team leader does not possess. When talking about letting go of the project, she says she is a woman and she cannot be unemotional

Men take these decisions a lot less emotionally

She does not face a climate where she feels she can voice her views and she thinks being a woman influences that, especially in front of leadership

It is not good to have a contrarian view especially when you are a woman. Our organisation has got only 2 women at the top

At the moment, she is not considering quitting. She believes she has come a long way and has risen in the ranks due to top leadership support. However, with the present situation, where she feels discriminated by her immediate bosses at every step, she has become unhappy, she is dissatisfied with both her job and her team leaders, and the stress is causing her both mental and physical distresses.

48.4.5 Glass Ceiling Belief Category—Acceptance

Women who showed ‘acceptance’ as their main glass ceiling belief believe that women prefer other life goals, such as family, over career. So they are also seen to be pro-family and anti-career

My daughter was small. It was near impossible for me to travel. It was either my job or my daughter.—Self-employed after quitting due to childcare

Over a drink you can sensitize your line manager about your aspirations, what you can do better- I don’t like to waste time on that. It’s just not me.—Sr Manager Risk, Bank, prioritizes family over networking

48.4.5.1 Career Success

Participants in this category reported low subjective career success.

They also dropped out of the ladder before they reached higher leadership roles, often due to maternity reasons, childcare or other family-care-related issues. They did join the workforce after a period of time, but they suffered a setback in their career in terms of promotion, salary or designation; hence, they also faced low objective career success

When I was expecting I didn’t want to go on maternity leave because there was so many opportunities coming and to leave it all behind and going was painful. But I knew I had to do it for the sake of my family.—Teacher, career change

Women face glass ceiling due to the phase in their lives like pregnancy, ratings are downgraded, they don't get bonus. When they return the role is not there, whatever is available is given to them.—Team lead, IT, was a high flyer before dropping out for 6 years for bringing up children

48.5 Discussion

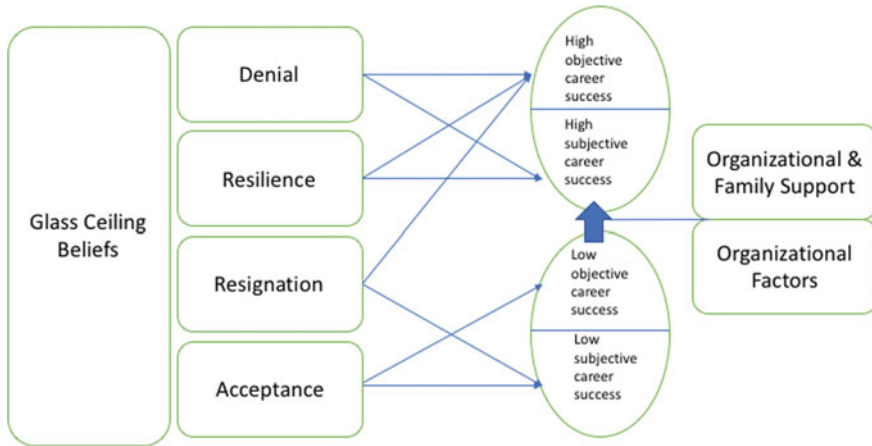
This paper explores the glass ceiling beliefs of women in senior level positions in Indian companies and finds that Indian women in senior roles often face their own glass ceiling beliefs and they have done it throughout their careers. It also discusses the women's interpretation of their career success, both subjective and objective. The paper then tries to find patterns in their glass ceiling beliefs and their experiences of career success linking it with earlier career success research.

Gender role theory has been used to prove that masculinity has a greater effect on job and career satisfaction than feminine traits (Ngo, Floey). However, both objective and subjective career successes can be possible through glass ceiling beliefs of women. The results show that in senior and board level Indian women, the four factors of glass ceiling beliefs can be the antecedents of subjective and objective career successes which is consistent with Smith et al. (2012a, b) and other findings in literature. The CPS (Smith et al. 2012a, b) defines 'denial' as the belief that women and men face the same issues and challenges at leadership levels. 'Resilience' is the belief that women can break the glass ceiling. 'Resignation' is the stage when women believe that there is no use trying to break glass ceilings because the odds are overwhelming. 'Acceptance' is the belief that women have other priorities over career like home and children.

Resilience and denial were optimistic because those who prescribe to these beliefs say that women can attain top positions in organizations. On the other hand, resignation and acceptance show pessimism as those who follow these beliefs imply that women do not have leadership goals or that family is more important than career. Since subjective career success variables are affected by optimistic or pessimistic thoughts, glass ceiling beliefs can become antecedents of both objective and subjective career successes.

Using the CPS as the pivot theoretical background of this paper, I have tried to find how the experiences of the participants have led to their career success. Career success may be objective or subjective. Objective career success is measured by tangible aspects like income, promotion, hierarchy and job mobility (Gunz et al. 2005; Van Maanen, 1977; Hughes 1958). Career satisfaction, emotional well-being, happiness and work engagement have been repeatedly related to subjective career success (Lyons et al. 2015; Fisher 2010; Judge and Hurst 2008; Bakker et al. 2008).

I represent my finding in Fig. 48.1, where the relationship between glass ceiling beliefs and career success is shown. The findings of this paper show that in India, women who have the glass ceiling beliefs corresponding to 'denial' and 'resilience'



Denial, resilience, resignation or acceptance- what leads to career success? A post-intentional phenomenological study among Indian women

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Fig. 48.1 Model of glass ceiling beliefs of women and their relationship with objective and subjective career success

had both subjective and objective career successes. Women who showed acceptance showed both low subjective as well as low objective career successes.

However, the surprise was in the ‘resignation’ category. Women who showed resignation also had high objective career success but low subjective career success. This is contrary to what career research on CPS has shown before. This may also be explained by the fact that many of my participants were from senior levels of management. However, among those not from senior management, my data show that those participants with low objective career success, all had glass ceiling beliefs corresponding to ‘acceptance’ and none from ‘resignation’. As the case study of Binny showed, resigning did not mean one had to let go of objective career success, though subjective career success was sacrificed in the process. Hence, in Fig. 48.1, high objective career success was reported by all participants except those with ‘acceptance’ as their glass ceiling belief, while women with both resignation and acceptance showed low subjective career success.

My findings also go on to show that women gain support from two sources: social/familial and organizational. All those who showed glass ceiling beliefs corresponding to resilience reported support from both their families and organization. Both familial

and organizational supports, when available, became a determining factor in shaping the women's subjective career success by increasing their resilience.

However, organizational managerial support varies greatly in the Indian work context. Formal voice systems in companies make it easier for women to get support for their grievances and it is their family and their mentors who make the real difference. Thus, women without family support and without support from their boss suffer in their career success as well. These women with 'resignation' and 'acceptance' reported getting no support from family or their organization senior management or mentors.

My study also found that low subjective and objective career successes could be transformed into high subjective and objective career successes if women got family and organization support as well as presence of certain organizational factors. Participants, who reported initial resignation or acceptance, and low subjective career success in their career, and later got organizational or family support, went on to resilience and reported both objective and subjective career successes. Thus, certain organizational factors like an informal system where women could get heard about their issues, development of women specific networks and having strong women mentors in organizations have a role to play in creating resilience affecting the subjective as well as objective career success of women, leading to both job satisfaction, emotional well-being, happiness and work engagement on the one hand, while also creating employment opportunities, promotions and higher salaries. This leads me to form a model in which I propose that low subjective and objective career successes which comes with resignation or acceptance can be transformed into high subjective or objective career success with the increased support from organization and family.

Finally, the surprising issue is that of 'denial', or the belief that glass ceiling is absent, or they have never faced it. As mentioned earlier, researchers have found this true in the context of India, where women have the "not me" effect (Jain and Mukherji 2010). The belief that glass ceiling does not exist, or that at least they have not been a victim to it, is widespread. Every study on glass ceiling in India, even in the last few years, has shown that it does exist across industries and levels (Bashir et al. 2021; Biju et al. 2021; Mohanty 2021; Kaur 2021). However, it has also been seen in glass ceiling belief research that denial leads to both high objective and subjective career successes. Therefore, while an amount of education is required for women about the presence of glass ceiling, as long as they continue to do well on their own careers, and happen to pull up women around them, perhaps it is better to let sleeping dogs lie.

48.6 Implications

In terms of theoretical implication, the methodology allows a novel approach to glass ceiling beliefs. Post-intentional phenomenology is still a fledgling method in qualitative studies, and this allowed the process of glass ceiling beliefs and career success to be studied, which also throws up the need for a positive social change, in

lines with Vagle's philosophy. This adds to theory by making it possible for more novel ways of research into glass ceiling beliefs as well as career success. This is also one of the few papers connecting glass ceiling beliefs and career success of both kinds, subjective as well as objective, especially in the Indian context.

This research has significance in looking at women's paid work from a feminist lens.

Women have been forced to 'fit' into what is basically a 'male model' of the organization (Calvert and Ramsey 1992). Thus, men's networks, exclusion from the networks and inner circles, late hours, after hour socializing are all meant to push women to the sidelines. Women are forced to conform to the same set of standards that have been set by men, for men. Thus, it is important to examine the beliefs of women, and understand where they stand, and how to make the best of it in their own context.

The findings of the paper have practical implications at both levels—organization and self. Organizations all over the world are scrambling to get on to the diversity wagon.

Reservations for women in the boardroom have become the law. Globally, progressive companies have stipulated targets of one-third women in senior management. But what organizations do not see is the negative aspect of certain glass ceiling beliefs, especially acceptance or resignation, on the success of women's careers. Family and organization support are essential for career success. The way forward for organization is to take steps to increase diversity and a well as awareness in the workplace. Workshops and training programs go a long way in addressing the issue. Providing equanimity in the workplace, training programs for gender awareness do work to change culture and mindsets in organizations with a macho sexist culture. The push for gender egalitarianism should come from the top. Participants report more 'buy-in' into gender diversity schemes and a more aware culture when the message comes from the top leadership.

Women themselves have a long way to go to gain career success. Their effort should not be to 'fit' the organization or prevalent masculine norms but to build their own niche, network more, be part of more women's groups and just speak up confidently and persuasively. Women should not be ashamed of their personal life and time. As more and more women rise to senior positions, the need for more female-driven rules is required. Constantly apologizing for having babies and giving them time, having family responsibilities, having to pick up children from creches, having to help them during exams, like the participants of my research do, will not raise confidence or help them get ahead. Women need to own their lives, own their families and be proud of being achievers in spite of the "different hats" she has to wear, as one participant put it. Women should demand more, "ask" when the time comes and not sit back and think that they will be recognized. It required guts and confidence, but that is what it takes. Also women need to get into more self-development and training programs to keep themselves relevant and upskill themselves whenever required. Women need to gain cognizance of their implicit biases.

48.7 Limitations

While a qualitative study on women's glass ceiling beliefs in India was sorely, the limitations of the study are the usual ones which come from having a qualitative study. Therefore, the results may be corroborated by using quantitative methods with a larger sample size. Secondly, the study was only done at senior level in the organized sector, so it may not be representative of all women managers at other levels of hierarchy in India since my participants already enjoyed objective career success to a great degree. This study can be replicated for other levels of designation and women working in other sectors. That and by increasing the number of participants may show mixed results in the 'resignation' category. I have not considered the individual differences of women in this particular study, concentrating more on the organizational factors. This is because the study specifically addresses the effect of glass ceiling beliefs on career success. However, the effect of a combination of glass ceiling beliefs and individual differences could be studied.

48.8 Conclusion

This study addresses the gap in Indian academic literature about a qualitative analysis of women's experiences and linking their glass ceiling beliefs with their subjective and objective career successes. The study uses post-intentional phenomenology which has not yet been used in researches on this topic and gives a richer understanding of the experiences of the participants. There are huge practical implications for organizations that are trying to improve on their diversity and inclusion strategies and make their culture woman friendly. They need to change the way they represent the voices of their women workers and provide support at various stages of a woman's career so that they can be more 'resilient' in their approach. It also has implications for women themselves who have aspirations for leadership roles and gives a guideline on how to manage their glass ceiling beliefs better.

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Chapter 49

Work–Life Balance and Occupational Stress Among Employees in Times of the COVID-19



Swati Vispute and Sanjana Kothari

49.1 Introduction

In the digital era, virtual workplaces were imagined as the future and were seen as a promising possibility. With the beginning of COVID-19, we as a whole are confined to our homes and compelled to telecommute. With this unexpected change in work culture, businesses and representatives are confronting difficulties with its execution. Work from home appears to be a worthwhile option with adaptable working hours and getting away from tedious commute hours, but there are still individuals who will have to commute to their work places. All of these have led to blurring of the line between personal and professional domains leading to increased occupational stress.

This research paper aims to study the work–life balance and occupational stress among working professionals in India with two groups of employees: employees working from home and employees working from office during COVID-19 pandemic.

49.2 Context of the Study

The human civilisation around the globe has been enduring the impact of COVID-19. Even the superpower countries could not protect themselves from this wrath. So, the ministries of various countries decided to observe total lockdown in the country except the emergency supplies. Now, here the people will be witnessing a scenario which will change the way they work. Within a few days, the traditional

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offices were completely shifted to the living spaces of individuals. Virtual meetings and completing tasks became the new normal along with home-schooling kids and taking care of the elder. To reiterate, with large swathes of the population working from home in quarantine, COVID-19 had drastically changed personal and work dynamics by removing the fine line between work and leisure.

At first glance, this appears to be something to be thankful for. Employees can keep carrying out their responsibilities and getting paid with not getting into hassles of daily commute. Also, it makes sense that working people ought to have additional time for family support, exercise, and leisure work.

This has not been the scenario although. People have now been working even longer because they have no excuse to put on. Before the pandemic, people could pack up at the end of the day and also had other family and personal obligations to attend, but now, there are no such plans to be made except rare stock ups from the super-market. Nothing is forcing the employees to shut down their laptops because they have ultimately saved a lot of time, and now when there has been news of widespread layoffs everywhere, employees have been playing strategically and putting longer hours to work and also by being available every time.

Usually, the employees used to be under some level of occupational stress, but never had someone imagined that a pandemic will lead to increased occupational stress among the individuals of the organisations. According to National Center for Immunisation and Respiratory Diseases (NCIRD) (May 5, 2020), the various work-related stressors that have emerged during this time and impacting employees emotional as well as physiological well-being are:

- Perturbed about the danger of being exposed to the infection at work.
- Dealing with an alternate outstanding workload.
- Absence of access to the devices and hardware expected to perform your activity.
- Emotions that you are not contributing enough to work or blame about not being on the cutting edge.
- Vulnerability about the eventual fate of your working environment or potential business.
- Learning new specialized communication platforms and managing specialized challenges.
- Adjusting to an alternate workspace as well as the work routine.
- Loss of employment, wage cuts and reduced benefits and incentives.

All these fiascoes have paved the way where people have been complaining about serious burnout issues. When there is no boundary between work and personal space, it leads to elevated levels of stress, affecting one both physically and mentally. On May 5, 2020, a survey undertaken by Monsters named “State of the Candidate” in the U.S. (1251 respondents) states that telecommuting has led to increased cases of burnout. The Indian Psychiatric Society revealed that mental health issues have been on the rise. During lockdown 1.0 itself, they observed a 20% increase in mental health concerns.

49.3 Literature Review

49.3.1 *Work–Life Balance*

What is work–life balance? We all have heard this term a thousand times; a significant number of us gripe that we do not have this adequate in our lives. It has become one of the most sought-after topics to be discussed among men and women and each one has a different view of it. If the term does not mean that one should give an equal amount of time to work and family; then what does it actually mean? According to Abendroth and Dulk (2011), work–life balance denotes the tuneful collaboration between the different domains of life. It plays a significant part in the success of an organisation. The organisation that lets its employees maintain their professional and personal lives has been proven to function and achieve better results and improves employee’s productivity and efficiency. The employees of such organisation do not perceive work as a burden and will work harder and will become the brand ambassadors of the organisation (Wedgwood 2020).

“Work life balance programmes offer a win–win situation for employers and employees. While the employee may perceive work-life balance as the dilemma of managing work obligations and non- work responsibilities, work-life balance from the employer ‘s point of view encompasses the challenge of creating a supportive company culture where employees can focus on their jobs, while at work. In whichever way it is viewed, the existence of effective work-life balance programmes in an organisation will do both the employee and employer good” (Igbinomwanhia et al. 2012).

Greenhaus et al. (2003) studied the correlations of work–family balance and quality of life and mentioned three elements that were essential to maintain work–life balance: time, involvement, and satisfaction. The hierarchical quadratic regression revealed that when professionals spent more valuable time with their family, they seemed to experience a quality life as compared to those who gave more time and importance to their work. A qualitative study by Hill et al. (1998) uncovered the impression of prominent profitability, higher morale, expanded adaptability, and longer work hours due to telecommuting, a dubious footprint on work–life balance. Their another study done in 2003 found virtual office positively affected work and fairly contrary on the individual life; traditional office played negative on both aspects, whereas home office had positive effects on both (Hill et al. 2003).

Flexible working hours also become part of balanced work life. Individuals tend to be more satisfied and committed to their organisation when they are allowed flexible working hours. In return for this favour to the employer, they tend to put more efforts to the job which leads to work intensification (Kelliher and Anderson 2009). Similarly, adaptable working scenario which provided workers control and choice had assertive effects on their mental and physical well-being (Joyce et al. 2010). High work–life balance was directly proportional to job performance (Johari et al. 2018; Adnan Bataineh 2019), job, and life satisfaction and was inversely associated with anxiety and depression (Haar et al. 2014). It is observed that individuals are able to

achieve well-being if they get sufficient time to meet their personal needs and that is when work–life balance aim is achieved (Gröpel and Kuhl 2009).

Due to certain problems, organizations fail in maintaining work–life balance among employees. Some of these issues are irregularity in the promotion of work–life balance initiatives in different organisations, lack of formalisation of policies at the top level; policies introduced to meet business needs irrespective of the fact that whether employee needs are met or not, to name a few (Hyman and Summers 2004).

Among academicians, it is observed that when they have more power over their projects, more timetable adaptability and more assistance from their organizations, they had a superior work–life balance. They suggest to have professional and domestic spaces to be different as it affects their health and some have expressed to leave the academia field all together due to high pressure and stress (Kinman and Jones 2008). In another study by Hans et al. (2015), work overload and diverse responsibilities acted as dismal factor among employees. However, when they were given autonomy in using innovative pedagogy, they felt competent and instilled loyalty towards the organization. In a cross-sectional study on work and mental health-related issues amidst COVID-19 in Japan, it is observed that the quality of work environment correlates with the anxiety associated to COVID-19 and work performance and it negatively correlated to psychological distress (Sasaki et al. 2020). Research has also demonstrated significant links between work–life conflict and stress (Sirgy and Lee 2018). Work–life conflict increases psychological distress (emotional exhaustion, emotional ill-being, anxiety, irritability and hostility, hypertension, depression), family-related stress (affective parental and marital stress), and manifestation of illness symptoms (somatic complaints, high blood pressure and cholesterol, alcohol abuse, and cigarette consumption).

49.3.2 Occupational Stress

Occupational stress is the widely accepted concern in all industries and establishments and is well- researched concept by the social scientists. Beehr and Newman (1978) defined occupational stress as “A condition arising from the interaction of people and their jobs and characterized by changes within people that force them to deviate from their normal functioning.”

The job stress is a result of uncontrolled physical and demands on a human being (Ivancevich and Matteson 1993). A recent study by Gerding et al. (2022) showed that more than 50% of the participants reported experiencing stress due to factors like increased workloads, poor occupational autonomy, working irregular hours, and the blurring of the line between one’s work life and home life. It is observed that during COVID-19, the occupational stress and remote working affected the employees’ psychological well-being (Prasad et al. 2020). An increased workload since the onset of the pandemic and around 55% of respondents believed that they could be exposed to COVID-19 in their workplace. Further they concluded that in addition to the stressors already present in the workplace, the pandemic has created

newfound obstacles such as increased workloads (e.g. health care), web conference burnout for those WFH, juggling childcare with work, especially in manual labour and business/office service, and time management issues present in all industries.

The researchers concluded that stress was found to be affected by a variety of personal and situational factors and the perception of an individual of those factors (Chun-Tung and Li 2016). One of the important antecedents of occupational stress is work–life conflict (Foy et al. 2019).

The reason why occupational stress should be avoided or minimised in the organizations is because it leads to toxic effects on the employees (Narban et al. 2016) and affects the job satisfaction (Vadivu 2017), health, and motivation of employees. Further to this regarding WFH populations, stress and burnout would further negatively impact those who may already be experiencing physical discomfort due to ergonomic problems, which have proven to be an issue since the onset of the pandemic (Gerding et al. 2021).

49.3.3 Remote Working

Remote work is a working/pattern that encourages professionals to work beyond the conventional office setting. In another way, instead of commuting to the workplace every day and working from a fixed desk, the remote workforce can carry out their activities and tasks and achieve their goals (Prasad et al. 2020). The beauty of remote work is that an employee can choose to work in a way that makes work–life balance perfect.

Telecommuting was perceived as a source of decreasing conflict between work and family; however, it has been viewed in a total negative aspect where the individual had to meet the family needs at the expense of their work by the other half. Though this mode of work tends to increase work–family conflict with some individuals, it was totally vice-versa with the other set of individuals (Golden et al. 2006). Nowadays due to digital connectivity, it does not let individuals draw a line between their work and leisure because of the urge to stay connected at all times. It directly hampers their balance with their work after work hours and hence work on their mental peace and development (Son and Chernova 2018). A study on family–work conflict proved that the important job demands of remote work significantly decrease productivity and work engagement on the one hand and increase job stress on the other (Galanti et al. 2021). An empirical study done during COVID-19 pandemic by Bellmann and Hübler (2020) showed that the impact on work–life balance is generally negative. If the imbalance is conditioned by private interests, this is not corroborated in contrast to job-conditioned features. Employees working from home are happier than those who want to work at home, job satisfaction is higher and work–life balance is not worse under a strict contractual agreement than under a nonbinding commitment.

49.3.4 Research Gap

As the recent pandemic due to COVID-19 has led to many organizations opting for remote working blurring the difference between work and life. There is increased job pressure on the employees, and at the same time, they have to look after the household responsibilities during pandemic. Thus, it becomes all the more relevant and important to understand the effect of occupational stress on work–life balance among the employees who are working from office as well as those who are working from home.

Thus, the objectives of the study are listed as follows:

- To study the occupational stress on employees of traditional office and work from home set-up.
- To study the work–life balance on employees of traditional office and work from home set-up.
- To study the relationship between work–life balance and occupational stress among employees amidst COVID-19 pandemic.
- To study the effect of occupational stress on work–life balance.

49.3.5 Research Methodology

This descriptive study explores the work–life balance and occupational stress variables through quantitative approach. The convenience sampling method has been used to collect the data through structured survey questionnaire from 132 respondents. The respondents include employees working in different domains from home ($n = 64$) and working from office ($n = 68$). The consent of the participants was taken before carrying out the survey.

49.3.6 Instruments

Work–life balance—For the purpose of this research, a structured questionnaires developed by Gröpel, 2004, was adapted. This 20 question WLB-6 deals with the fit between work and family/relationships system and includes items related only to the work/achievement and the contact/relationships areas.

Occupational Stress—The scale created by Srivastava and Singh (1981) comprising 46 items is adapted to study the occupational stress among the respondents.

49.4 Data Analysis and Results

This section shows the inferential statistics performed on the samples collected. The proposed statistical tests are: T-test, Pearson’s correlation, and regression.

The t-test in Table 49.1 suggested that there was a significant difference in body/health [$t(130) = 2.11, p < 0.05$], between the two groups [employees working from office > employees working from home]. Also, there was a significant difference in occupational stress, [$t(130) = 2.15, p < 0.05$], between the two groups [employees working from office > employees working from home].

Table 49.2 shows the Pearson’s correlation among the following variables that are: contact/relationship, body/health, life meaningfulness, work/achievement, and occupational stress.

The significant correlations in the above table are as follows: contact/relationship is moderately correlated with work/achievement [$r(131) = 0.53, p < 0.01$], contact/

Table 49.1 T-test

Variables	<i>F</i>	<i>p</i> -value	<i>t</i>	<i>p</i> -value
Work–life balance—contact/relationship	1.472	0.227	– 1.893	0.061
Work–life balance—body/health	0.564	0.454	2.110	0.037
Work–life balance—life meaningfulness	0.099	0.754	– 1.912	0.058
Work–life balance—work/achievement	0.139	0.710	– 0.588	0.557
Occupational stress	0.297	0.587	2.155	0.033

Table 49.2 Pearson’s correlation

		Contact/relationship	Body/health	Life meaningfulness	Work/achievement	Occupational stress
Contact/relationship	Pearson’s correlation	–				
Body/health	Pearson’s correlation	– 0.013	–			
Life meaningfulness	Pearson’s correlation	– 0.031	– 0.177*	–		
Work/achievement	Pearson’s correlation	0.531**	– 0.036	– 0.052	–	
Occupational stress	Pearson’s correlation	– 0.397**	0.130	– 0.148	– 0.463**	–

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

* Correlation is significant at the 0.05 level (two-tailed)

Table 49.3 Regression test statistic

Variable	<i>B</i>	Beta	<i>t</i>	R Square	Adjusted R Square	R Square change	<i>F</i>	<i>p</i> -value
Occupational stress (predictor)	- 0.067	- 0.463	- 5.952	0.214	0.208	0.214	35.423	0.000

Dependent variable: work/achievement (work–life balance)

relationship is negatively correlated with occupational stress [$r(131) = -0.39, p < 0.05$], body/health is negatively correlated with life meaningfulness [$r(131) = -0.17, p < 0.01$], work/achievement is negatively correlated with occupational stress [$r(131) = -0.46, p < 0.05$].

As per Table 49.3 the work/achievement and occupational stress scores were only considered for regression analysis, despite the occupation stress scores' significant relationship with contact/relationship and work/achievement scores' significant relationship with contact/relationship as an effort to eliminate the issues of multicollinearity.

The regression table indicates that occupation stress scores can significantly predict the work/achievement score [$\beta = -0.463, t(131) = -5.95, p < 0.001$]. Occupation stress also explained a significant proportion of variance in work/achievement scores [$R^2 = 0.21, F(1, 130) = 35.42, p < 0.001$].

49.5 Discussion

The present study aimed to investigate the occupational stress and work–life balance among two sets of employees: employees working from home and employees working from office during COVID-19 pandemic. It is observed that occupational stress has increased among the employees and the work–life balance had gone for a toss because of a complete disruption in the way the organisations worked during pandemic.

Working from home had its own advantages where the employees received the benefits of engaging more with the family, friends, and relatives along with flexible work hours, and it was assumed that it would improve work–life balance; but when it became a mandatory norm to work from home during the pandemic, few months in this new set up and the employees had already established the fact that they would like to get back to their traditional offices.

Flexible work hours seem to be a great option when it comes to work from home, but this ultimately leads to employee doing more work as now they had no excuses to present and hence kept on doing more work. The major reason behind this was also the layoffs happening in the pandemic which forced employees whether working from office or from home to keep doing the extra work and show their loyalty and commitment to the organisation. The increased accountability lets them to keep on

working even in their family or leisure time and hence affecting their work–life balance.

Employees working in office during such times still had the advantage to wrap up at the end of the day and get back to their homes where they can spend time with their families, and hence, it can be stated that they tend to have a better work–life balance than those working from home. Employees working from home reported that they found it difficult to quit even after their work time was over and this was severely impacting their work–life balance (Hill et al. 1998).

With the increasing number of covid-positive cases in the country, there was an increasing level of apprehension observed among the people. Where some organisations could not grant work from home policy for some of their employees, those employees had to daily report to offices amidst this lockdown. Hence, because of the fear of getting infected to this deadly virus and the thought of jeopardizing the lives of their family members and others in the work place and the community, there was observed an increased level of stress among the employees working from office as opposed to employees working from home. Apart from this, other occupational stressors like work overload, overtime, peer support, strenuous working conditions, and under participation also suggested an increased level of occupational stress among the employees working from office. The fear of getting laid off and salary cuts had become a regular practice in many organisations because of the complete shutdown of the economy leading to huge losses to the organisations also was a reason sighted by employees from both the sets leading to increased levels of stress.

Also, it was assumed that increased levels of occupational stress would lead to decreased quality of work life, but the research study negated this hypothesis. In fact, it was inferred that occupational stress affected the quality of work life to a minor extent among the employees working from office or working from home. This study reiterates a past study by Hans et al. (2015), where these two variables were also negatively associated with each other. Further, it demonstrated the hypothesis that if quality of work life (QWL) is better in an organisation, the work-related pressure will be moderately lesser among the individuals. It proposes that the individuals working in such organisations are gaining satisfaction from the working environment.

Also, increased amount of stress and working overtime may also affect the physiological as well as the mental health of the employees. Already, individuals are being more precautionous with their health and immunity in the pandemic. In the present study, we could observe that there is a negative correlation between body health and life meaning which means that if an individual is not fit physiologically, he/she will definitely not be able to enjoy and be productive in other areas of life. This has been validated by another research by Kinman and Jones (2008), where they stated that the professors in UK Academics were putting in longer hours to work even on their weekends, leading to working more than 48 h per week schedule. The more they worked overtime, the more was the deterioration of their physical and physiological health, ultimately leading to more work–life conflict and unclear home and work domains.

The present study also observed a negative correlation between contact/relationship and occupational stress. This suggests that with increase in occupational stress, the employees tend to lose touch with family and friends. This has been reaffirmed by another study by Kinman and Jones (2008), where they observed that with increase in occupational stress among the professors in UK academics because of work overload and overtime, various respondents reported cases of withdrawal and irritability from friends and family. They stated that work strain leads them to not be able to fulfil social responsibilities.

According to a study by Keshavarz and Mohammadi (2011), occupational stress significantly affected work performance of employees. The present study also observed similar results in this respect where there was a negative correlation between occupational stress and work achievement. Employees working from office stated to be more stressed because of various factors discussed above, and hence, it could be predicted through regression the fluctuation in the levels of their work/achievement.

49.6 Conclusion

All in all, the study observed that the employees perceived a significant level of stress whether working from home or working from office in this pandemic, with employees working from office perceiving increased level of stress than the employees working from home because of the risk of getting infected to the virus. Also, the effect of occupational stress on work–life balance can be gauged by the fact that the work–life balance of both sets of employees: work from home and work from office had disrupted balance. Employees working from home complained of greater work–life disbalance because of the blurred line between the work and the personal domain.

49.7 Limitations

The sample size of the study was relatively small and it was limited to 132 participants. The larger sample will help in getting clearer results.

49.8 Implications

The further research should be conducted in the area where organisations are required to develop necessary strategies to enhance the work–life balance of its employees. In order for any significant improvement to take place, further research is required in the area where organisations along with enhancing work–life balance simultaneously works on providing unambiguous instructions regarding the expectations

from employees and innovative methods to be developed for assessing employee's performance.

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Part XI
Information Systems and Decision Sciences

Chapter 50

Six Technologies Driving Digitalization of Industrial Warehouses



Prakash Agrawal, Praveen Nagesh, Sonu Navgotri, and Ravi Sharma

50.1 Introduction

During the past decade, rapid technology development has rationalized the manufacturing and distributing value chain. The growth of digitization has altered nearly everything in today's business, including SCM and set huge pressure on firms to reform. In the course of staying at competitive position, companies need to make investment in new digital technologies for the purpose of achieving sales and business development, higher customer satisfaction, cost and product differentiation, faster responsiveness, and better relations with partners (Abdirad and Krishnan 2020). These global trends of digitization and automation are changing economies, societies, disrupting businesses, and impacting everything from planning and product design to production and supply chain and ultimately disrupting businesses.

Beyond the production processes and supply chain, nonetheless, the new digital technologies such as drones, AR, IoT, and advanced robotics can likewise affect the way by which products are moved, warehoused, and distributed (Barreto et al. 2017).

A warehouse/distribution centre is a place used for storing or holding raw materials, finished or semifinished goods for varying length of time. The main functions of warehousing are stock piling, stock mixing, transloading, protection against contingencies, and shipping (Rimiene 2008). Besides, today's warehouses are not only utilized as storage or distribution centres but also hold various value-adding services such as repairing, assembling, labelling, and repacking. Warehousing accounts for up to 30% of the total logistics cost (McCann 1996). Hence, effective management of warehouses would be crucial for overall supply chain performance.

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The new digital technologies enable smart warehousing that can adapt to significant changes in their functions. In recent years, warehouses have been transformed from traditional warehouse-based inventory accumulation into high velocity distribution centres, which are progressively regarded as strategic facilities to bring competitive advantage rather than cost centres. Due to globalization and exponential rise in e-commerce transactions, the need for greater customization, higher production output, faster responsiveness, and reduced labour costs are increasing. In such conditions, the need for digitalizing warehousing operations with advanced digital technologies has become more significant, which save time; drive safety, cost, and revenue benefits.

In spite of having such competitive advantage of employing Industry 4.0 technologies in warehouses, industries hesitate to adopt such technological advancements as there is absence of clear comprehension (Agrawal et al. 2019) of specific application of those technologies in warehousing operations. In this paper, authors endeavour to figure out the specific applications of Industry 4.0 technologies in various activities of warehouses. The remaining sections of the paper are arranged as follows. Literature review is discussed in the next section. Methodology and survey results are illustrated in Sects. 50.3 and 50.4. Section 50.5 highlights the impact of Industry 4.0 technologies on different warehousing operations. Sections 50.6 and 50.7 present discussion and conclusion of the study, respectively.

50.2 Literature Review

Industry 4.0 presents the next phase of digitalization in manufacturing which is induced by following disruptions: the amazing ascent in data volumes, unprecedented connectivity, computational power, the evolution of big data analytics, advanced man-machine communication, and enhancements in communicating digital instructions to the actual world. Similar to digital manufacturing, digital warehouses integrate new analytical and physical technologies to save time, transform operations, reduce costs, achieve strategic advantage, and optimize people (Deloitte 2016). The COVID-19 pandemic also urges for global digital transformation. The pandemic revealed that there is urgent need to leverage disruptive digital technologies for greater resilience (Little 2020). The pandemic has accelerated digital adoption on the demand side in India. Organizations will have to understand to potential disruptions and opportunities not only in their sectors but also in the entire world of customers, suppliers, and adjoining markets. Borisova et al. (2019) advocated that digitalization of warehouse will augment and expand the opportunities for companies to offer rapid fulfilment, greater variety, and availability with cheaper costs. A digitized warehouse management system (WMS) enables managers to monitor all inventory-related activities in real time, reduces inventory and labour cost, and increases warehouse productivity.

Traditional warehouses and distribution centres are undergoing digital transformation mainly because of two driving trends. The first is fundamental change in the manner consumers interact with businesses. Today's customers want to receive

the product as soon as possible exactly as per their requirements. At the same time, expectations related to order customization, service requirements, and omnichannel shopping are highly increased (Kembro et al. 2018). This trend demands a new type of warehouse which would be highly adaptable, responsive, expandable, and optimizes the potential of workforce and technologies in a cooperative relationship. Secondly, warehousing is experiencing the stream of technology innovation. Drones, IoT, sensor technology, autonomous robots, analytics, and augmented reality-based wearable devices are assembling to bring out something new, i.e. digital or smart warehouse (Alias et al. 2017).

50.2.1 Warehouse Diversity and Complexity

There is so much diversity and complexity associated with traditional warehouses as it differs with the nature of industry and the purpose for which it is developed. It differs widely in terms of size, layout, nature of goods to be stored, location, proximity to airports or seaports, etc. The warehouses may be designed as production warehouse, distribution warehouse, raw material, or finished or semifinished merchandise centres. In the supply chain, its function also varies from transit warehouse to transshipment centres, cross-dock centres, fulfilment centres, etc. In addition to these complexities, each industry has its unique warehousing demand. For example, automobile industries require large parking lots, railways want open yard, while perishable items require continuous cooling and flammable goods require extra security and surveillance (Flytbase 2015). These complexities make it imperative for industrial warehouses to enhance its operations and activities with Industry 4.0 technologies (e.g. drones, AR, IoT, advanced robotics, etc.), which improve productivity and efficiency of warehouses and ultimately, the efficiency of the supply chain.

The use of technologies to drive automation in warehouses is not new. Distribution centres have been using mechanized picking system, automated guided vehicles (AGVs), and automated storage and retrieval systems (ASRS) for decades.

But, this type of automations was limited to material handling and systems that need to be kept away from operators for safety (Takakuwa et al. 2000). Also, these systems require high degree of standardization in processes and products limiting the ability to change. This lack of flexibility in systems to adapt changing demands signifies that there is great need to adopt new digital technologies which drive unprecedented flexibility and traceability in warehousing operations.

50.3 Methodology

To examine the applicability of Industry 4.0 in warehouse management system, a brief literature review is conducted. In this study, following databases have been explored such as Scopus, ScienceDirect, ResearchGate, Google Scholar, and Wiley

to identify appropriate literature. The keywords that were used during the search are ‘impact of Industry 4.0 technologies on warehousing operations’, ‘digitalization of warehouse management’, and ‘integration of Industry 4.0 and warehouse management system (WMS)’. A total of 71 papers were found, and to limit errors in the screening, the methodology suggested by Popay et al. (2006) has been used. The papers were eliminated considering their titles, abstract, and duplication. Finally, 28 papers have been selected for review. Then, selected papers were thoroughly studied, and handwritten notes are prepared. Further, the notes were compared and discussed with experts to identify the key Industry 4.0 technologies and their roles in digitizing WMS. Five experts in total were personally contacted; three were professors from academic institutions and two were top business executives. The academicians are well versed in Industry 4.0 technologies and have an average expertise of more than 26 years in related fields of study and research. The opinions of the industry executives were also solicited after personal interviews. Moreover, a survey has also been conducted among Indian organizations to prioritize the identified technologies. A total of 298 participants was invited to fill the online questionnaire out of which 82 completely filled questionnaires were received, gave an effective response rate of 27.5% matching with the response rate of earlier surveys (Rexhausen et al. 2012).

50.4 Survey Results

Figure 50.1 shows the ratings given by participants to digital technologies enabling digitalization of warehouse. It can be observed from Fig. 50.1 that IoT, blockchain, augmented reality, wearable devices, drones, and autonomous robots have received high ratings (all have mean around 4 and above). Therefore, the impact of these technologies on various warehousing activities has been discussed in this study. Further, respondents were asked to rate the extent to which the digital technologies enhance warehouse management with regard to following parameters as shown in Fig. 50.2.

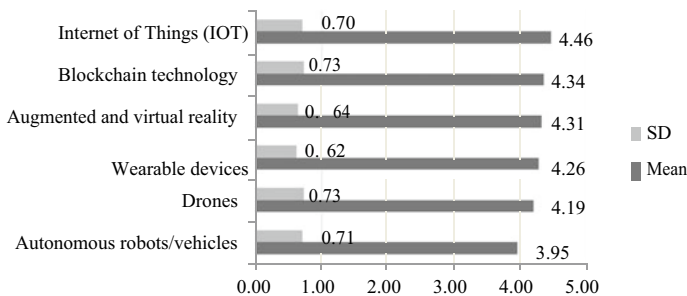


Fig. 50.1 Ratings of technologies enabling digitalization of WMS

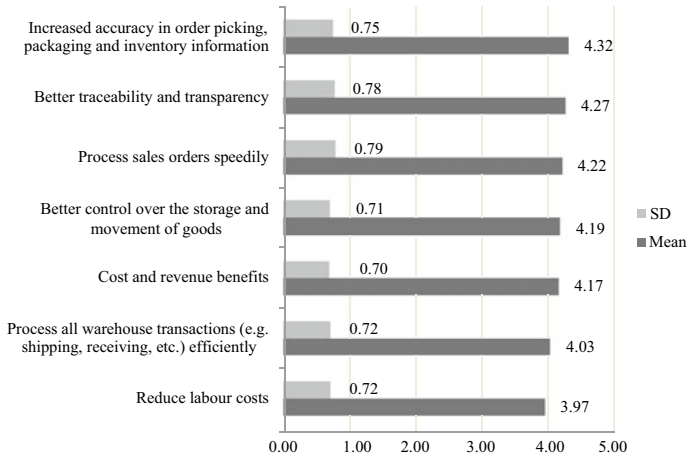


Fig. 50.2 Expected outcomes of employing digital technologies in warehousing operations

50.5 Implications of Industry 4.0 Technologies on Different Warehousing Operations

‘Internet of things (IoT)’, ‘blockchain’, ‘augmented reality and wearable devices’, ‘autonomous robots and vehicles’, and ‘drones’ seem to be most favourable for the digitalization of warehouses, and their implications (see Fig. 50.3) are discussed in subsequent sections.

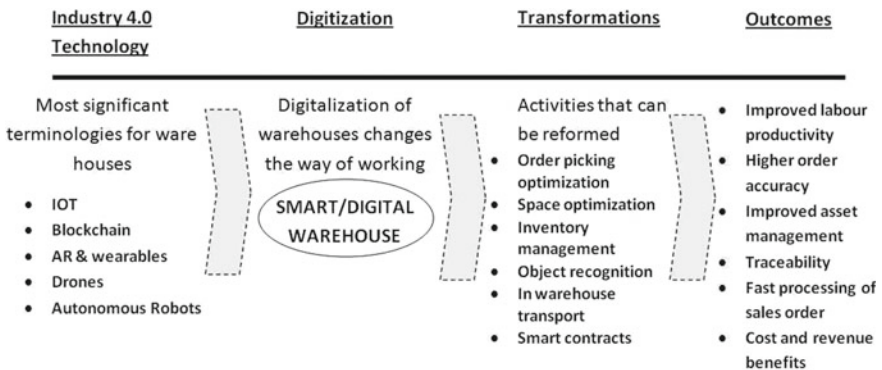


Fig. 50.3 Warehouse implications of Industry 4.0

50.5.1 Internet of Things

Warehouse management incorporates wide range of activities across different locations. IoT enables store manager to refine internal operations and update suppliers, customers, and others efficiently. IoT tracking system provides manager with status updates from the advent of items to the warehouse to its delivery to end customers and also sends notifications in case of any complications. The Internet of things systems track the location of merchandise, detect warning signs and equipment malfunctions, and increase warehouse security (Kumar et al. , b, 2022a). The United Nation Organization of Food and Agriculture expressed that 1/3 of total food items deteriorate due to lack of proper storage conditions (FAO 2011). IoT systems and sensors empower warehouse administration to track merchandise on each phase of delivery and monitor temperature, pressure, and moisture conditions inside the cart and automatically adjust these parameters and other properties that could endanger the trustworthiness of shipped products, reducing losses due to spoilage and increasing customer satisfaction.

IoT improves asset management within the warehouse. It increases store keepers' awareness regarding each and every product stored in the distribution centre. They would be able to get information with respect to low stock of specific item, access location of all items, and get informed whenever a product is misplaced. IoT facilitates continuous monitoring and automatic adjustment of storage conditions. Moreover, supervisors are cautioned immediately in the case of item robbery, expanding the chances of item recovery and determining the individual liable for that (Lee et al. 2018).

50.5.2 Blockchain

Blockchain can be a unique tool to reduce logistics and warehousing costs. It increases the accuracy and reduces the cost of inventory management within a warehouse (Kumar et al. , b, 2022a). Organizations normally operate distribution centres on an extremely reactive basis; they request more stock just when stock runs short. Blockchain permits organizations to follow precisely which item (at what quantity) is situated in the distribution centre at a given time. In addition, blockchain permits manufacturers to plan their manufacturing cycle efficiently by assessing real-time end user demand and thereby keeping the right sort and amount of inventory required to manage variation in demands. In this way, blockchain reduces the risk of stock-outs and optimizes profitability. It also eliminates chances of an item being lost in the distribution chain. Blockchain can drive unprecedented transparency and traceability within a warehouse and can reduce administrative costs and authenticate against counterfeit products (Kayıkcı 2020). It allows for adoption of 'smart contracts' that facilitates automated recording of delivery date, location, price, certification and other relevant information, automated payments of inventory received, etc., which

simplifies transactions and increases traceability of material supply chain (Shao et al. 2022). It records movement of product/material on a ledger that allows real-time tracking and reduces chances of human error.

50.5.3 Autonomous Robots and Vehicles

Advanced autonomous robots and vehicles are another way to improve the productivity of distribution centre. Autonomous vehicles can find the shortest way to restock the inventory without any human intervention, whereas autonomous robots are equipped with artificial intelligence and machine learning which enables them to think and mimic like humans and learn from their surrounding, which increase the intelligence and flexibility of robots.

Moreover, the ability to connect these robots via IoT and greater safety features has been additionally built enabling them to work side-by-side with operators that bring unbelievable safety and efficiency in their operations (Agrawal and Narain 2021).

Amazon has developed robots (formerly Kiva systems) for moving objects within the racks irrespective of their shape and size, which improves its picking and packing tasks resulting in lesser lead times and self-organized warehouse. Amazon stated that they have improved productivity within their warehouses after deploying these robots (Kim 2015).

50.5.4 Drones

Unmanned aerial vehicles/drones are essential for digitalization of warehouses. Moving around the warehouse is often tedious for workers. They would need a ladder to reach elevated racks, which increase the risk of accidents and decrease the efficiency of inventory management. They can fly autonomously, operate at high altitudes, and survey resources and premises. Drones have the ability to search hard to track items, can enter small storage locations, and transfer real-time information for easy integration of data in the warehouse management systems. The most promising application areas of drones in warehouse operations are inventory management, inspection and surveillance, and intra-logistics of items (Companik et al. 2018; Wawrla et al. 2019).

Drones can be utilized to perform a number of inventory management tasks like stock taking, cycle counting, product search, inventory audit, buffer stock maintenance, etc. These tasks are generally performed daily or weekly and are usually monotonous, labour intensive, tedious, time consuming, dangerous, expensive, and prone to errors. Drones can add value to optimize this process; e.g. employing drones in inventory audits can save up to half of administrator's time and increase inventory per square feet by as much as 50% as drones can navigate in narrow space

(Kille et al. 2019; Wawrla et al. 2019), which decrease labour costs, increase inventory accuracy, and reduce injury risks for warehouses. Drones can also be employed for quick transit of various items such as tools and spare parts between warehouse and industry, thus improving intra-logistics efficiency. Inspection and surveillance in warehouses are continuous and often require skilled inspectors. Drones might be an appropriate option to take over from physical inspection and monitoring in distribution centres. Even, these are ideal for operations that require inspection and supervision in hazardous fields and high elevations (Hell and Varga 2019).

50.5.5 Augmented Reality (AR) and Wearables

Warehousing operations account up to 30% of total logistics cost in which the task of picking holds 55–65% of total warehousing costs (DHL 2014). AR can possibly optimize the picking process; from voice picking to vision picking. Earlier, warehouses use paper or scanner to pick items, then distribution centres started voice picking which uses speech recognition to direct workers finding desired objects in a warehouse instead of scanning barcodes, and preparing documentation opens up their hands and empowers them to work more proficiently and quickly. Vision picking is further evolution in the picking process. Vision picking uses AR-based wearable PC or head-mounted display which provides real-time object recognition and indoor navigation and enhances view of items with their digital information (Rejeb et al. 2021; Merlino and Spröge 2017). This system enables workers to get digital picking list and guide them through the most efficient path within the warehouse saving their travel time. The system also equipped with image recognition capabilities that ensure that whether the worker has reached at the correct location also direct him to quickly get the right item on the rack. Then the worker would be able to scan the object and register it in warehouse management system simultaneously, empowering continuous inventory updates. This process also reduces the training time that bridges language barriers with migrant workers (Stoltz et al. 2017). Hence, this process enables workers to locate objects quickly and more accurately, decreasing costs and enhancing efficiencies. DHL tested these devices in its distribution centre and noticed a 25% increment in picking efficiency (Deloitte 2016).

50.6 Discussion

Global supply chains are trying to cope up with the changing needs of world we are entering. In the era of digital world, the digitalization of industrial warehouses has become an essential need as the effective management of warehousing activities can be critical for the overall supply chain performance. Technological advancements occurred in recent years can possibly transform industrial warehouse in meaningful

ways, making it more productive, agile, and sustainable, and the Industry 4.0 technologies can be leveraged for digital transformation of warehouses. This paper highlights the Industry 4.0 technologies which are most favourable for transforming traditional warehouses into an agile, adaptable, and digital warehouse and enumerated the ways in which those technologies can impact various warehousing operations. The benefits of a digital warehouse indicated that employing those technologies in warehousing activities will create a sustained competitive advantage for industries by increasing transparency and traceability, responsiveness, and saving time and costs.

The emergence of e-commerce, exaggerated use of social media platforms, and exponential growth in use of Internet and smart devices drives drastic change in shopping habits and customers' expectations.

Today's consumers want a quicker, accurate, and distinct buying and execution process. Moreover, the rise of Industry 4.0 has disrupted the industries. All these things are increasing the threat of commoditization. Under such conditions, relying on traditional execution system has become less viable, which makes it vital for businesses to exploit new innovations for achieving strategic and competitive advantage. Therefore, it is imperative for organizations to leverage the potential of the latest digital technologies in their operations. Organizations that do not take early efforts to harness the opportunities offered by digital technologies will struggle to remain competitive.

Today, the emerging technologies are ready to provide tangible benefits across many industries including logistics and warehouses. Companies planning to implement Industry 4.0 technologies in their warehouse will face certain technical, social, and organizational challenges that have to be overcome such as high investment cost, battery life, privacy, and network performance issues. Therefore, it is assumed that the clear comprehension of impact of Industry 4.0 technologies in warehousing operations will automatically let industries realize the significance and necessity of adopting them, and organizations would start taking all such drives needed to strengthen their capabilities for realizing full benefits of digital warehousing.

50.7 Conclusions and Future Scope

In this paper, authors have featured the necessity and advantages of Industry 4.0 technologies for the digitalization of industrial warehouse/distribution centres. The technologies discussed in this paper (IoT, blockchain, AR, wearables, and autonomous robots) facilitate greater operational flexibility, improved productivity, and reduced operational cost and drive more modular and adaptable automation within a warehouse. Therefore, it is imperative for managers and policymakers to proactively assess the implications of new digital technologies on industrial warehouses and their possible applications and benefits, which will allow them to plan adequately in order to fulfil future customers' demand and business's objectives in the current global market that will be quickly changing in future. Further, the research can be extended towards development of framework for implementation of the same.

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Part XII
International Business and Strategy

Chapter 51

Internationalization Speed of Born Globals: A Systematic Literature Review



Dinesh Prabhu

51.1 Introduction

The Uppsala model illustrates the gradual process of internationalization of Swedish firms, first through foreign agents and then through a subsidiary, with the growth in sales and ensuing operations. The Uppsala model argues that internationalization first commences in a foreign country close to the headquarters (HQ), where the degree of closeness is the physical distance (Johanson and Vahlne 1977). However, this assumption was contradicted by Rennie (1993) in the McKinsey Quarterly, in which he argued that some firms with a desire to go global internationalized aggressively from the outset. Knight et al. (2004) refined this argument by stating that BGs generate at least 25% of total international operations revenues by entering foreign markets under three years of their inception. The central argument of BG scholars is that the Uppsala model does not distinguish between gradual and aggressive international expansion (Freeman et al. 2010) and fails to consider pace as a construct in the study of internationalization. Most of the scholarly work on BG has focused on two research questions: Why do some firms engage in early and accelerated internationalization? What are the antecedents?

Prior literature reviews of internationalization speed have several shortcomings: They do not focus on BGs, stress excessively on definitions, and do not offer any empirical insights on BGs. Also, prior studies have reported inconsistent findings, exacerbated by the heterogeneity in measuring speed and international performance (Hilmersson and Johanson 2016). Two papers on the meta-analysis of internationalization speed focus on pre-entry (Williams and Crook 2021) and post-entry (Huang et al. 2022) speed of multinationals. However, to date, no systematic literature review has specifically emphasized the comprehensive understanding of the internationalization speed of BGs and the identification of the drivers and barriers. Considering

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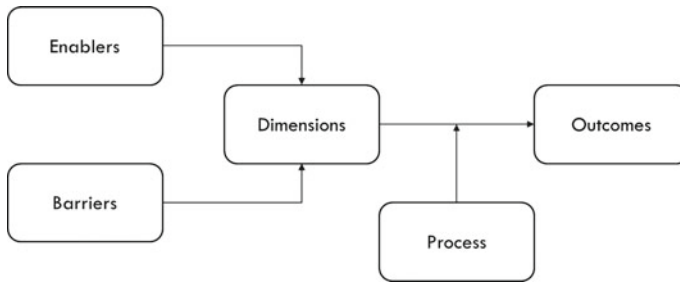


Fig. 51.1 Analytical model of internationalization speed

these shortcomings, the aim is to consolidate research on how timing and speed influences firm performance, international learning speed, and the scope/dispersion of international markets over time, in a comprehensive analytical model. This paper aims to provide a systematic review highlighting empirical studies' findings and future research directions.

This paper encompasses the BG literature by making two new contributions. First, it gives an overview of the current status of BG research conducted by using the analytical model (Fig. 51.1). This review covers 61 publications over 20 years during the period 2002–2022. This paper intends to find the interdisciplinary nature of the BGs. Second, this paper presents a future research agenda. We delve into BGs from emerging markets. I explore corporate governance and dynamic institutions as future avenues for BG research. As a result, this study offers new valuable insights on the phenomenon of BGs.

The structure of the paper: In Sect. 51.2, I discuss the methodology used for conducting the review. In Sect. 51.3, I consolidate the findings of the empirical studies using the analytical model. In Sect. 51.4, I present directions for future research.

51.2 Methodology

51.2.1 Identification of Relevant Articles

To identify the relevant literature on internationalization speed of BGs, I searched scholarly databases (Elsevier, Google Scholar, and Web of Science) via the key phrases “speed of internationalization,” “internationalization speed,” and “born global” in abstracts and titles. Then, I scanned the reference lists of the selected papers to expand the list of articles. A total of 61 empirical papers related to internationalization speed of BGs included 49 articles on post- entry speed and 12 articles on pre-entry speed. The identified contributions are listed in the reference list and Appendix I. A choice related to the scope of the literature review was made considering the possibility of omitting relevant articles that were conceptual in nature. The

articles considered for this review focused on contributions within international business, international marketing, and strategic management. Also, following Skjølsvik et al. (2017), I only considered journals listed in the ABS Academic Journal Guide. I included only full-length empirical research papers that (a) described or examined the speed of internationalization grounded in any theory or phenomenon and (b) the journal’s ranking was one and above (Table 51.1).

Table 51.1 Contributions identified for this literature review

<i>Pre-entry</i>	
2004	Knight and Cavusgil
2005	Luo et al.
2007	Zhou, Wu and Luo
2011	Hashai
2012	Park and Rhee
2014	Cannone and Ughetto
2017	Choquette, Rask, Sala, and Schröder
2019	Rodríguez-Serrano and Martín-Armario, Braunerhjelm and Halldin, Lin and Si
2020	McCormick and Somaya, Kumar et al.
2022	Xie
<i>Post-entry</i>	
2002	Vermeulen and Barkema
2007	Acedo and Jones
2009	Morgan-Thomas and Jones
2011	Chang and Rhee
2012	Kalinic and Forza, Musteen et al.
2013	Taylor and Jack
2014	Powell, Casillas and Moreno-Menendez, Mohr et al., Mohr and Batsakis
2015	Wei et al., Li et al.
2016	Schu et al., Hilmersson and Johanson, Hutzschenreuter et al., Johanson and Kalinic
2017	Yang et al., Mohr and Batsakis, Garcia-Garcia et al., Meschi et al., Batsakis and Mohr
2018	Surdu et al., Qian et al., Mohr et al., Sadeghi et al.
2019	Powell, Lin and Si, Hsieh et al., Jain et al., Jain et al., Angulo-Ruiz et al., Mohr and Batsakis, Tang
2020	Hilmersson and Johanson, Cheng et al., Kim et al., Freixanet and Renart, Petrou et al., Hutzschenreuter and Harhoff
2021	Acedo et al., Batsakis and Theoharakis, Vlačić et al., Li et al., Samant et al., Zahoor and Al-Tabbaa, Li et al.
2022	Deng et al.

51.2.2 Analytical Model

To categorize the essential elements of the internationalization speed of BGs, I conducted a meta-review of review papers (Williams and Crook 2021; Huang et al. 2022). Five main elements were identified through this meta-review: antecedents (enablers and barriers); dimensions; process; and outcomes (Fig. 51.1).

51.3 Discussion

51.3.1 Dimensions of Internationalization Speed

In this sub-section, I review the measures employed by authors to evaluate the internationalization speed. The measures are classified under pre- and post-entry internationalization. Luo et al. (2005) measure pre-internationalization speed in terms of the age at entry into international markets. The post-entry internationalization speed is the time taken to reach a certain level on the three dimensions, namely change in the breadth (ratio of the total foreign markets exported to time), growth in international commercial intensity (ratio of growth of exporting intensity to time), and change in foreign resource commitment (ratio of the proportion of foreign assets held to time) (Hilmersson and Johanson 2016). Next, I review the different theoretical lenses employed by researchers to study BGs.

51.3.1.1 International New Venture

Luo et al. (2005) study the internationalization of e-commerce companies (ECCs) and argue that ECCs are different from traditional MNCs regarding organizational and environmental factors. Hence, product life cycle and the transaction cost logic of gradual internationalization do not apply to ECCs, characterized by flexibility in product flow, synchronized information flow, and fewer physical and cultural constraints.

51.3.1.2 Paradox Theory

Batsakis and Theoharakis (2021) examine the organizational paradox of MNEs that internationalize swiftly and concomitantly in new and existing foreign markets. The findings suggest that simultaneous internationalization speed positively influences firm performance.

51.3.1.3 Upper Echelons Theory

Mohr and Batsakis (2019) argue that international experience of TMT has an inverted U-shaped association with speed. At higher levels of experience, TMT members become cognizant of the possible diseconomies due to time compression and hence become better at judging the risks of internationalization. Li et al. (2021a, b) examine the influence of narcissistic owner CEOs on post-entry speed. They argue that the relationship is positive due to CEO's inflated self-views, overestimated problem-solving abilities and competence, and their belief that accelerated operations are controllable.

51.3.1.4 Linkage, Leverage, and Learning (LLL)

Jain et al. (2019a, b) study the rapid internationalization of Indian software firms and contend that speed and firm performance relationship is moderated by LLL capabilities.

51.3.1.5 Springboard Theory

Kumar et al. (2020) study the pre-entry speed of Indian firms and contend that unaffiliated young firms perform their first cross-border acquisition faster than older firms. Samant et al. (2021) study technological innovations in the Indian biopharmaceutical industry. The findings suggest that firms innovate in mature technologies due to faster cross-border M&As.

51.3.1.6 Dual-Process Theory

Vlačić et al. study how entrepreneurial cognition influences the speed of internationalization. The dual-process theory suggests that processing of human information comprises the experiential and sound (analytical) cognitive systems. The findings suggest that firms that internationalized early and at a faster rate had entrepreneurs with an experiential cognitive system.

51.3.2 Enablers of Internationalization Speed

The enablers discussed in this literature review were strategic options that resulted in a higher internationalization speed and in better firm performance. The identified enablers have been grouped under five categories: social capital, learning, experience, institutions, orientation, and resource-related enablers (Table 51.2).

Table 51.2 Enablers of internationalization speed

Category	Enablers	Articles
Social capital	Network embeddedness domestic network	Musteen et al., Zahoor and Al-Tabbaa (2021)
Learning	Depth of past experiential learning	Casillas and Moreno-Menendez (2014)
	Experiential cognitive system	Vlačić et al.
	Dynamic absorption capacity	Rodríguez-Serrano and Martín-Armario
	Greenfield investments	Samant et al. (2021)
	Indirect learning	Hutzschenreuter et al. (2016)
	Technological knowledge	Garcia-Garcia et al. (2017), Yang et al. (2017)
Experience	TMT international experience	Luo et al. (2005), Mohr and Batsakis (2014), Mohr and Batsakis (2019), Hsieh et al. (2019), Freixanet and Renart (2020)
Institutions	Culturally similar markets	Powell (2014)
	Government promotion of SOE, institutional escapism of POE	Wei et al. (2015), Angulo-Ruiz et al.
	Market capitalism	Tang (2019)
	Institutional development	Surdu et al. (2018)
	Industry dynamism	Qian et al. (2018)
Orientation	Entrepreneurial orientation	Knight and Cavusgil, Acedo and Jones (2007), Li et al. (2015)
Resource	Internal resources and capabilities	Chang and Rhee (2011)
	Intangible assets	Mohr and Batsakis (2014)
	Inimitability of assets	Schu et al. (2016)
	Speed of capability development	Hilmersson and Johanson (2020)
	Internet-enabled technologies, BI	McCormick and Somaya, Cheng et al. (2020)

51.3.2.1 Social Capital-Related Enablers

Musteen et al. (2010) study the impact of the network embeddedness of the Czech SMEs' CEOs on speed and performance.

Cognitive embeddedness in the form of congruent language between Czech CEOs and international ties results in rapid internationalization. Structural embeddedness in the form of geographically diverse ties positively affects performance.

51.3.2.2 Learning-Related Enablers

Casillas and Moreno-Menendez (2014) find that diversity and depth of past experiential learning have a curvilinear relationship with internationalization speed. Surdu et al. (2018) study the foreign market re-entry speed of firms who had previously exited the same markets and posit that experiential learning depends on the firm's institutional setting. The experience gained between preliminary entry and exit does not affect re-entry speed. However, the depth (joint ventures) and type (exit process) of experience gained substantially impact the re-entry speed. Samant et al. (2021) compare two perspectives of the internationalization process of BGs: gradual internationalization (greenfield investments) and the springboard perspective (rapid cross-border M&As). BGs assimilate novel knowledge needed for novel technology innovation through experiential learning from greenfield ventures, whereas they assimilate knowledge needed for innovation in mature technologies through cross-border M&As.

Hutzschenreuter et al. (2016) study the sequential order of knowledge acquired during the internationalization of incumbent MNEs' new business units (NBU). Direct learning ensues only after the firm understands the outcomes of its action. Indirect learning happens due to the knowledge transfer of the outcomes of the others actions. NBUs related to their parent MNEs' portfolios gradually depend on indirect learning to gain business knowledge, decreasing the significance of direct learning and increasing speed.

García-García et al. (2017) argue an inverted U (curvilinear) relationship between internationalization speed and long-term performance.

This relation is moderated by technological knowledge, which steepens the curve, and the diverse experience which flattens it. Theorizing on TCD, Yang et al. (2017) found a similar inverted U-shaped relation.

Jain et al. (2019a, b) argue that BGs overcome the limitation of insufficient experiential knowledge through rapid internationalization, which aids in gathering and connecting cultural and institutional knowledge about several foreign markets. BGs increase geographic scope to recombine their miscellaneous knowledge and generate solutions with the help of added cultural distance.

51.3.2.3 Experience-Related Enablers

Luo et al. (2005) study the effect of TMT international experience of American e-commerce firms on the speed of internationalization. Recruitment of managers with difficult to codify, tacit foreign market knowledge, and experiences results in a fast pace and competitive advantage. Mohr et al. (2014) argue that international experience enhances a firm's capacity to deal with LOF associated with the foreign entry. Hsieh et al. (2019) posit that the entrepreneurial experience translates into decision rules and superior absorptive capacity, which empowers the firm to gather supplementary foreign market knowledge and increase reasoning capability, speed, and expertise which ultimately results in rapid internationalization. Freixanet and Renart

(2020) study the likelihood of survival of manufacturing SMEs and posit that international experience develops managerial capabilities and simultaneously overcomes the drawbacks of cognitive inertia with a positive influence on firm performance and survival.

51.3.2.4 Institutions-Related Enablers

Wei et al. (2015) evaluate the government's influence on state-owned firms (SOFs) and privately owned firms (POFs). SOFs internationalize and establish foreign networks through the financial and regulatory support of the Chinese government.

However, from an institutional escapism perspective, the same discriminatory support reduces the domestic market and forces POFs to internationalize rapidly. POFs have the freedom to obtain institutional legitimacy due to their weak political links compared to SOFs. Tang (2019) studies the internationalization speed of Chinese SOFs from an institutional logic and isomorphism perspective and argues that state ownership, due to its socialism logic, has a negative impact on speed. However, from an isomorphism viewpoint, firms operating from a market capitalism logic shape institutions in a way that SOFs become market-oriented and increase the pace of internationalization. Surdu et al. (2018) contend that the degree of institutional development relative to the exit time positively moderates the association between prior experience and re-entry speed.

51.3.2.5 Orientation-Related Enablers

Knight and Cavusgil from a pre-entry perspective argue that EO replicates the firm's proactiveness to pursue international expansion and consists of vision, active competitive posture, and innovativeness. Acedo and Jones (2007) suggest the same for post-entry speed.

51.3.2.6 Resource-Related Enablers

Chang and Rhee (2011) examine the pace of foreign expansion under high globalization pressures and suggest that superior internal resources and capabilities enhance firm performance. While Mohr and Batsakis (2014) contend positive impact of intangible assets on internationalization speed, Schu et al. (2016) suggest the same for inimitability of assets. Hilmersson and Johanson (2020) argue that the speed of capability development is the highest for Grafters, who build their knowledge through their own experiences, employ personnel, or acquire firms, and Pragmatists, who alter their knowledge sources based on contexts. They find a curvilinear relationship between speed of capability development and internationalization speed.

51.3.3 Barriers of Internationalization Speed

The barriers discussed in this literature review are impediments that have a negative effect on the speed and firm performance. The identified enablers have been grouped under five categories: social capital, learning, experience, institutions, and resource-related barriers (Table 51.3).

51.3.3.1 Social Capital-Related Barriers

Musteen et al. suggest that the relational embeddedness in personal ties has a positive association with speed but a negative association with performance due to CEOs' reliance on personal rather than professional sources for information.

51.3.3.2 Learning-Related Barriers

Hilmersson and Johanson (2016) study the effect of SME speed on performance from the perspective of time compression diseconomies (TCD). When the firm enters too many markets simultaneously beyond a threshold, its managers are incapable of integrating the learning and resulting routines, thus adversely affecting performance. Lin and Si suggest that exploration has a negative impact on speed.

Table 51.3 Barriers of internationalization speed

Category	Barriers	Articles
Social capital	Extensive reliance on personal contacts	Musteen et al.
Learning	TCD	Hilmersson and Johanson (2016)
	Technological knowledge	Garcia-Garcia et al. (2017)
	Diversity of past experiential learning	Casillas and Moreno-Menendez (2014)
Experience	Repetition-based experience	Li et al. (2021a, b)
	Higher levels of international experience	Mohr and Batsakis (2019)
Institutions	Regulatory reforms increase and intense home-market competitive intensity	Powell (2014)
	State ownership	Tang (2019)
Resource	Resource constraints	Qian et al. (2018)
	Limited organizational slack	Powell (2014)

51.3.3.3 Experience-Related Barriers

Li et al. (2021a, b) classify domestic experience based on repetition (growing number of domestic cross-regional investments) and diversity (experience gained through exposure to a diverse institutional environment at home). Here, firms develop know-how about managing complexities with flexibility which aids in managing complexities during international expansion. From an upper echelons perspective, Mohr and Batsakis (2019) argue that at higher levels of international experience, TMT members become better at measuring the risks and are cognizant of the possible TCD associated with rapid internationalization.

51.3.3.4 Institutions-Related Barriers

Powell (2014) suggests that regulatory reforms increase operating restrictions and intense home-market competitive intensity may result in divergence or decrease in resource commitments to speedy foreign expansion.

51.3.3.5 Resource-Related Barriers

Qian et al. (2018) suggest that resource constraints negatively influence internationalization speed.

51.3.4 *Processes of Internationalization Speed*

Firms undertaking FDIs at an accelerated pace face difficulty in learning from their preceding FDI experience, since the absorptive capacity is dependent majorly on past knowledge. In contrast, Cohen et al. introduce the construct of time to market which lays emphasis on the swift introduction of new products quickly when firms possess fast development capability. Time compression diseconomies (TCD) were introduced by Dierickx and Cool and suggested that rapid foreign expansion in a short period results in an inappropriate organizational structure and business models. Due to the bounded rationality of managers and their limited cognitive scope, the fine-tuning of the new structures and routines would happen gradually. The age of a born global firm during first foreign expansion determines its scale of international market selection. Born global firms select psychically distant markets have entry modes in the form of joint ventures and acquisitions (Taylor and Jack 2013). Internationalization process of BGs is a nonlinear process with stages of acceleration and deceleration. The process is nonlinear due to the time taken by the firm to recognize and exploit opportunities, accumulate experience with a particular mode of entry, and turn it into useful knowledge (Johanson and Kalinic 2016). However, BGs commit to a dominant

internationalization path (expansion in degree of foreign operations or geographic scope).

51.3.5 Outcomes of Internationalization Speed

Outcomes mentioned were either internationalization speed or firm performance. Enablers consistently had a positive influence on speed and performance, whereas barriers had a negative impact. Several studies also reported a curvilinear relationship.

51.4 Future Research Agenda

51.4.1 BGs from Emerging Markets

India and China have the most prominent start-up ecosystem after the USA. Freshworks, an Indian-born software-as-a-service (SaaS) firm headquartered in San Mateo, California, raised \$1.03 billion in its Nasdaq IPO with a \$10.1 billion valuation. Similarly, Moove, a Nigeria-born auto financing start-up, has internationalized into 13 markets across three continents. This shows how the institutions of developing countries are shaping the start-up ecosystem to produce BGs. However, most of the literature on BGs is from developed economies (Cavusgil and Knight 2015) or the high-tech domain (Rialp et al. 2005). Research on BGs from emerging economies is, however, at a nascent stage (Gonzalez-Perez et al. 2016). Even though BGs from emerging economies face the challenge of institutional voids (Khanna and Rivkin 2001), BGs undergo rapid internationalization to acquire strategic assets and overcome the constraints at home and latecomer disadvantages (Luo and Tung 2007). Emerging markets are characterized by institutional voids like infrastructure limitations, underdeveloped judicial systems, higher political risk, and administrative barriers that distinguish them from developed economies.

51.4.1.1 Corporate Governance

Contrary to the internationalization process of incremental foreign market commitment (Johanson and Vahlne 2017), Luo and Tung (2007, p. 484) argue that EMNEs “systematically and recursively use international expansion as a springboard to acquire critical resources needed to compete more effectively against their global rivals at home and abroad and to reduce their vulnerability to institutional and market constraints at home”. However, Luo and Tung (2007, p. 494) caution that “owing to underdeveloped stock markets at home, poor accountability, and lack of transparency stemming from their ties with their host government, corporate governance of EM

MNEs is generally weak.” The same applies to BGs whose export revenues exceed the 25% threshold. Hence, the speed of foreign expansion and corporate governance are vital constructs in studying the internationalization of BGs. Prior studies focus on institutional investors and family ownership in developed economy contexts. In the emerging economy context, Panicker et al. (2019) study examined the impact of the risk appetite of different types of owners on the preferences for internationalization of Indian firms. Building on this study, I propose that future research examines the impact of heterogeneity in ownership on internationalization speed of BGs. In this review, only two papers examine the relationship between internationalization speed and ownership (Tang 2019). However, these studies measure state ownership’s influence on Chinese firms’ internationalization speed. Hence, this is an exciting avenue for future study.

Board capital is a focal point in the internationalization process (Maitland and Sammartino 2015). Board capital (board interlocks) refers to the capability of the board to provide resources (Hillman and Dalziel 2003). Since BGs from emerging economies are characterized by resource scarcity, the mode of accessing resources is influenced by the resource-provision competence of the board (Singh and Delios 2017). Hence, I propose that examining the impact of interlocks on the internationalization speed will enhance our knowledge about corporate governance in BGs.

51.4.1.2 Dynamic Institutions

The institutional perspective posits that firms compete in an institutional environment that sets the “rules of the game” (North, 1990) and ultimately influences the strategic decisions and the performance of firms (Cuervo-Cazurra et al. 2019a, b).

Developed and emerging economies devised institutional changes in promarket reforms (Cuervo-Cazurra and Dau 2009), intending to liberalize the market and improve the judicial system, IPR regime, and infrastructures (Dau 2012). Promarket reforms, characterized by industry deregulation, privatization of state-owned firms, opening the economy to capital inflows, and removing trade barriers, enable competitive market transactions, limiting government intervention in these transactions (Hoskisson et al. 2000). These reforms, which commenced in the 1980s in some communist regimes like China and in the early 1990s in socialist economies like India, resulted in replacement of the import-substitution model with an export model and turned China into a manufacturing hub and India into an IT giant and resulted in an unparalleled international expansion by firms from emerging economies to become global competitors. Institutional changes are static events that focus only on the scope of the change. However, Banalieva et al. (2015) argue that institutional changes in promarket reforms are multi-step processes carried out gradually or rapidly. Hence, the dynamic institutional perspective illustrates the speed of institutional changes and the performance implications (Banalieva et al. 2015). Some governments employ rapid reforms to increase efficiency, reduce transaction costs, and demonstrate the pledge of the government to liberalize the market (Banalieva

Table 51.4 Future research directions

Issue	Construct	Relevant theories	Potential research questions
Corporate governance	Ownership structure	Principal–principal agency theory behavioral risk perspective	How do different types of owners influence internationalization speed? What are the risk preferences of these owners?
	Board interlocks	Resource dependence theory	What types of resources do the directors procure through their relationships with other firms? How does it impact speed
Institutional transitions	Speed of promarket reforms	Institutional theory, institutional logics, isomorphism	How does a firm synchronize its speed to different patterns of promarket reforms?

et al. 2018). However, governments that have introduced promarket reforms in the past implement them gradually (Rajan and Zingales 2003).

Cuervo-Cazurra et al. (2019a, b: 598) describe these institutions as the “rules and regulations that facilitate market transactions and limit the role of the government in the economy” due to efficient capital markets, developed judiciary, and IPR protection. Emerging economies, to liberalize the market, implement promarket reforms (Cuervo-Cazurra and Dau 2009), which lead to improvement in governance and reduction in market imperfections.

Promarket reforms not only reduce the government intervention in market transactions, with the government assuming the role of a facilitator but also reduce industry and trade barriers to foreign competitors and investors (Dau 2012).

The literature on the rate of strategic change suggests that the rate at which a firm changes its strategy in uncertain environments becomes a determining factor of its success (Brown and Eisenhardt 1997). To achieve a fit with their external environment, emerging market firms carry out aggressive cross-border M&As (Elango and Pattnaik 2011; Luo and Tung 2007). Popli et al. (2017: 354) posit that “a positive impact of internationalization is contingent on whether or not firms entrain (synchronize) the temporal parameters of their internationalization activities with those of promarket reforms”. Future research could focus on a more nuanced approach to synchronizing internationalization speed with different patterns of promarket reforms.

Table 51.4 gives a summary of future research directions.

51.5 Conclusion

BGs are reshaping the global economy’s competitive landscape and occupying the IB field’s center stage. They exhibit unique characteristics which contradict the traditional gradual process of internationalization. Hence, the need for a systematic review

can inform researchers about the theoretical contribution made by scholars on BGs over the years. This paper provides a comprehensive and detailed review of the research of BGs by employing a comprehensive analytical model which is based on five elements: dimensions, enablers, barriers, process, and outcomes. The future research agenda is based on the rapid institutional changes and the calls for further research to integrate the strategic fit perspective. This paper also calls for further research on the ownership structure and board interlocks as part of the corporate governance in BGs.

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Chapter 52

Sustainable Marketing Strategies of White Goods Post-COVID-19



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52.1 Introduction

The consumer durable industry consists of two types of products. The white goods and the brown goods. This study is about the white goods industry. The market of white goods is huge with a valuation of US\$ 647.5 Billion in the year 2021 according to the report of market research by IMARC in 2021. However, this figure is expected to touch US\$ 923.7 by 2027 with a Compound Annual Growth Rate (CAGR) of 5.80% during 2022–2027. The unit statistics says that refrigerator occupies 30%, followed by air conditioner and washing machine with 20% each, then dishwasher and microwave ovens by 10% each, and others together 10% of the global market share specifically in regions like Asia Pacific, Europe, North America, Latin America, Middle East, and Africa.

In India, the washing machine market has the highest share with US\$ 8.43 Billion followed by air conditioner with US\$ 1.8 Billion as per the report of Statista.com, in 2021. This industry is growing in a compounding rate.

The white goods industry is not only a business-to-consumer (B to C) concept, but also is adopted by other industries like health care, hospitality, and railways. These industries for the purpose of hygiene use white cotton and linens in their upholstery and have aided in boosting up the white goods industry. Also on the other hand, the technological advancement has also given this industry a new shape and direction. The AI and the IoT enablement in the goods have been highly preferred among the consumers and other industries due to its design, ease of use, smartness, and aesthetics. This type of innovation is a step toward sustainability.

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Like other industries, this industry had also suffered a huge set back with the hit of COVID-19 pandemic. The physical shops, dealers selling the white goods had to shut down for a distinctive time suffering heavy loses. However, after a thrill ride of around two years, the business owners, entrepreneurs, marketers, and manufacturers are all set to come back on their job. A large portion of the businesses in the primary portion of 2020 was antagonistically affected because of pandemic-instigated lockdown. Buyers have spent a lot of their time in their homes. This gave the white goods industry a new challenge to update itself with a wide scope of innovation along with the assurance of security, quality, and hassle-free purchasing. The shoppers were constantly paying special mind to improve their way of life with more astute apparatuses. Then, the public authority forced limitations on imports and fortified homegrown assembling which thusly prompts increment independence and lessened import bills. This leads the manufacturers and marketers to guide their strategies toward maintainable development and benefit by setting their needs, for example, building computerized establishment organization and building solid authoritative insusceptible framework. The association ought to be outfitted with a solid advanced establishment network to restore the organization in future pandemic circumstances. HATKE is a concept initiated by Shirish Kulkarni, Founder & CEO at STROTA ConsulTech Pvt Ltd in their organization. This paper has attempted to apply this concept to the sustainability of white goods.

The study has attempted a mixed research design approach of quantitative and qualitative to study the customer's perception and business strategies. The qualitative techniques included word cloud and sentimental analysis of the interview conducted with ten different business owners and corporate stalwarts on the HATKE components and how it affects particularly the white goods industry. The quantitative approach included predictive modeling of the customer's perception based on the HATKE components and further discussed the business strategies that can be adopted based on the results.

52.2 Literature Review

White goods are usually consumer appliances like air conditioners, washing machines, electric fans, microwave ovens, refrigerators, sewing machines, and cleaning equipment. There is also another category of consumer durables, i.e., consumer electronics which are called brown goods. They comprise televisions, CD and DVD players, laptops, electronic accessories, audio and video systems, personal computers, digital cameras, and camcorders (IBEF Report 2019).

The consumer durable sector in has covered a long way since 1950, where there were only radios which were imported. In 70 years, India has seen a lot of changes in this sector. Then came the era of television sets with two major revolutions. But during this time, the entire control was with the government due to the license system. As a result, the consumer faced a lot of difficulty in buying these commodities. Hence, these commodities had become an item of luxury for them. Not only the consumers,

there was very little scope for entrepreneurs to evolve in this sector. Monopoly was prevailing with a few players. Gradually, the sector grew with other innovations like refrigerator in 1970, washing machines in 1980, and microwave ovens and A/Cs in 1990. Even in 1990 also, these items were very expensive and profit margin was very high. But after liberalization, privatization, and globalization, there has been a huge growth in the consumer durable market. There are tremendous potential of export of Indian products and import of foreign products (Premkumar 2014).

The LPG concept welcomed FDI investments which proved to be a boon to the industrial and economic development of the country. This had resulted in employment generation and entrepreneurship generation in all sectors including consumer durables. The market had gradually started to become competitive. Competition had led to multiple issues: (1) the prices and quality of goods and services had a standardization, (2) more choices to the consumers, (3) pressure on the manufacturers to produce and deliver quality goods and services at competitive prices, (4) innovative strategies to be adopted by the marketers to market their products/services to achieve competitive advantage.

Later in 2014, the startup movement with the Make in India campaign initiative by the Honorable Prime Minister, and with the industrial revolution 4.0, India has witnessed a drastic change in the entrepreneurship in the National level. Local and budding entrepreneurs were given a platform to build, develop, and market their products and services in and across borders. By 2019, India had become the third largest startup eco-system in the world. But in 2020, when the pandemic hit the world, there was an economy-driven meltdown. But it could not stop the entrepreneurs and marketers. They quickly adapted themselves to the situation and transformed their businesses to digitalized form. This change was a boon in disguise. People and markets were connected very economically. There was scope for technological innovation which also led to growth of more business avenues.

According to Kalaiselvi 2017, India can become the fifth largest market in consumer durables by 2025. And according to Isita and Juin 2018, the e-commerce industry will be booming post-2021 in the entire globe from \$2.3 tn to \$4.48 tn approximately.

This prediction was proved when the central government under its “atmanirbhar” vision announced production-linked incentive (PLI) of Rs 6238 cr for some selected manufacturers in India under the PLI scheme. This scheme is specifically for the white goods sector (The Economics Times 2021, May 30). Commerce and Industry Minister, Piyush Goyal said that the PLI scheme is aimed at bringing cost-competitiveness, quality, efficiency, and technology upgradation for manufacturing companies at the national level. Rs 1.97 lakh crore for PLI schemes for 13 key sectors was announced in Budget 2021–22 aimed to generate \$500 billion in production over five years. The ministry said that the PLI alone can expand a quarter of the total manufacturing output of the last five years and the minimum expected employment through this scheme over five years is 1 crore. As an outcome of this scheme, 40 companies have been chosen for the PLI under the white goods sector with a committed investment of Rs. 4614 crore. This scheme will span seven years till 2028–29 (Govt. 2021, Nov 03).

On the other hand, India is witnessing a rise in the price of white goods like TVs, washing machines, and refrigerators because of the high raw material prices and decreasing rupee value. India is facing retail inflation. CEO Dinesh Chhabra- Usha international said that the govt is playing a critical role in cutting down customs duty for raw materials like coal, plastic, and steel. This might reduce the cost of the goods despite inflation (Suneja 2021, Jun 15). However, Kamal Nandi, Business Head and Executive Vice President of Godrej appliances, said that despite these initiatives of the govt., the companies must raise the cost by 3–4% in the next few quarters as the gap between inflation and price hike is wide enough to about 15% (The Economics Times 2022, May 24). Nestle India Chairman and MD Suresh Narayanan also added to the depreciating rupee has resulted in a rise of 30% in manufacturing costs since December 2020 (Dutta 2022, Jun 26).

According to FIFIELD and AMY (2006, Sep 11), Videocon has been chosen as the preferred bidder for Daewoo Electronics, one of South Korea's largest white goods and television makers, underlining its ambitions to acquire more international brands.

But somehow, it is anticipated that the PLI scheme will be able to manage the issue. The components used in ACs were till now not manufactured in India. But now, it will give a platform for the manufacturers to produce it in the country. Anil Agrawal, additional secretary, DPIIT said during a press conference that domestic value addition in these segments is expected to grow from the current 15–20% to 75–80%. Rs.500 crores of investment under this scheme have already taken place and the scheme could generate nearly 46,368 direct employment opportunities in the next five years (Mint 2022, Jun 28).

On the other hand, according to Gangopadhyay (2022), urban India is shifting toward a self-care approach due to the increasing nuclear family status and high amount of relocation for employment purposes. The population is more dependent on technology and mobile communication. Not only the younger generation, also the older population has a higher demand for easy and approachable goods. To this Khanna and Sampat (2015) added that the retail industry in India is prepared to face the challenges and go ahead with the rapid transformation from offline to online platforms. The customers are engaged in conscious buying after the COVID-19 pandemic. The idea of sustainable practices has not only aroused the business houses but also the consumers. They have started using sustainable products which are in the triple bottom line aiming to people, planet and profit (Magdalena et al. 2022). When it comes to buying decision, women in the household are playing a major role in it. The extent of the decision-making power exhibited by a woman is influenced by her status in the family, her income level, education, occupation, and most importantly the category of the product to be purchased (Myrzabekkyzy et al. 2021).

New Delhi, July 15: The first wave of the pandemic, which had a stringent lockdown, had more severe impact on the sales and merchandising of the white goods. However, in the second wave which led to regional lockdowns, in the year 2022, had witnessed comparatively less severe consequences. Because by that time, the

business houses had learnt the strategies to adapt to the circumstances. The companies reported good year-end sales as per reports. Data analysts at one of the leading financial services companies, Motilal Oswal had also predicted a revenue increase of 49% by the first quarter of financial year 2022. As per Harshit Kapadia at Elara Securities India Pvt Ltd, in the month of May in 2022, the sales of consumer durables had declined particularly for items like air conditioners. Analysts at Emkay Global Financial Services Ltd. also said that cooling devices like ACs, refrigerator, fans, air coolers in spite of the hot and humid weather conditions in most part of the country.

Rising commodity prices will also continue to exert pressure on margins. MOFSL pegs Ebitda margins at 8.6% for companies under its coverage versus 12.4% in the previous quarter. Not surprisingly, net profits are estimated to decline 55.8% sequentially even though they may more than double on year.

Marketers had expected that the sales might catch up in the festive season in the month of August. Hence, there were certain concerns of the manufacturers and business houses regarding price hikes of these products to increase its margin to regain the lost profit. Keeping the sustainability factor in mind, the companies had to keep the cost low. But could hardly control on their advertising and promotional expenses. Leaders as Havells India Ltd, Voltas Ltd, and Blue Star Ltd have seen corrections of 9–16% since their recent highs in February–April.

52.3 Problem Statement

The COVID-19 pandemic is an unexpected phase that nobody must have ever thought will ever happen to humans. It is such a wave that nobody knows when it will be over. In such a situation, it is a big setback for all marketers, manufacturers, and business owners. But despite this challenging situation, the marketers did not stop to strategize for innovative ways to sustain their businesses. In this study, the researcher is focusing on understanding the response of the customers toward purchasing white goods with the help of the HATKE concept which focuses on health, attitude, technology, knowledge, and engagement. The researcher aims to predict the sustainability of the white goods market using the HATKE parameters. Thereafter, the study also aims to suggest marketing strategies for white goods that are presumed to be sustainable in the future. The task is not a cake walk, but the paper aims to discuss some of the breakthrough ways.

52.4 Research Gap

Considering the problem statement discussed above, the research is targeting a niche sector of white goods sustainable marketing strategies and the customer's preferences toward it which has not been explored much to date. This study was performed keeping in mind the scenario during and post-covid times. Hence, this research

is going to highlight such strategies through quantitative and qualitative research techniques. In addition to that, the researcher has used the concept of HATKE which has not been explored from a research point.

52.5 Objectives of the Study

1. To understand consumer preferences with respect to their attitude and health, attitude, technology, knowledge, and engagement (HATKE) in the utilization of eco-accommodating white merchandise during and post-COVID-19.
2. To study the relationship between HATKE components and customer perceptions.
3. To study the impact of HATKE components on the customer's perception of buying white goods during and post-COVID-19.
4. To understand the marketing strategies adopted by the white goods manufacturers and marketers to create a sustainable advantage during and post-COVID-19.

Hypothesis

H1: There is a significant relationship between the HATKE components and customer perceptions.

H2: There is a significant impact of HATKE components on customers' perception of buying white goods.

52.6 Research Methodology

The research design adopted for this study is a mixed approach, quantitative and qualitative. For the quantitative study, the correlation between the HATKE components and customer perception was studied. Thereafter, a predictive model using multiple regression has been built to predict the impact of the HATKE components and customer perceptions toward purchasing white goods. For the qualitative study, sentiment analysis and word cloud were generated from the responses received from the personal interview of business owners. Sentiment analysis depicts the positive or negative opinions of the respondents on a particular subject. And word cloud gives the frequency of the opinion of the respondents. Both these techniques are used when there are qualitative responses in the form of expressions and dialogues.

The data was collected from the following sources: (1) personal interview of business owners, manufacturers, and marketers, (2) administering questionnaires of the responses collected from the customers visiting white goods dealers, (3) exploring secondary sources like EBSCO, ProQuest, and SAGE databases.

A personal interview technique has been used to analyze the qualitative which is derived from a standard open-ended questionnaire. The survey method has been adopted using a structured questionnaire on a 5-point Likert scale.

The sampling technique adopted for the qualitative study is judgmental sampling where the respondents dealing with white goods merchandising were selected. The total sample size for the qualitative study is 10. The sampling adopted for the quantitative study is convenience sampling where the respondents were selected based on their footfall in the white goods merchandising dealers. The sample size for such an infinite sample is 384 using the following formula:

$$\text{Sample Size} = [z^2(p)(1 - p)]/c^2 = [(1.96)^2 * 0.50 * (1 - 0.50)] / (.05)^2 = 384$$

where z = level of significance.

p = the population proportion (assumed to be 0.50 since this would provide the maximum sample size).

c = confidence interval expressed as a decimal (example, 0.05 = 5%).

Quantitative data was analyzed using SPSS, and qualitative data was analyzed using Azure Machine Learning in MS Excel and word cloud using open-source word cloud builder.

52.7 Data Analysis

Sentiment Analysis of the Respondents (Manufacturers, Business Owners, and Marketers) for Health and Attitude Components of HATKE

Sr. No	Respondents	Sentiment	Score
1	R1	Positive	0.674974728
2	R2	Positive	0.920920432
3	R3	Negative	0.270099849
4	R4	Negative	0.111755192
5	R5	Positive	0.893685997
6	R6	Negative	0.383601367
7	R7	Positive	0.802255611
8	R8	Negative	0.022327999
9	R9	Negative	0.072327999

Interpretation of Sentiment analysis (Health and Attitude): As out of ten respondents, nine responses were valid, and the sentiment analysis is done for nine responses. Out of nine, four responses are positive in attitude and health toward white

goods merchandising during pandemic and post. A score above 0.5 is considered positive and scores below 0.5 are considered negative.

Sentiment Analysis of the Respondents (Manufacturers, Business Owners, and Marketers) for Technology, Knowledge, and Engagement Components of HATKE

Sr. No	Respondents	Sentiment	Score
1	R1	Positive	0.970099849
2	R2	Positive	0.820340432
3	R3	Positive	0.770099849
4	R4	Negative	0.143192342
5	R5	Positive	0.933385976
6	R6	Negative	0.383601367
7	R7	Positive	0.802255611
8	R8	Negative	0.023327875
9	R9	Negative	0.068327001

Interpretation of Sentiment analysis (Technology, Knowledge, and Engagement): As out of ten respondents, nine responses were valid, and the sentiment analysis is done for nine responses. Out of nine, five responses are positive in technology, knowledge, and engagement toward white goods merchandising in the pandemic and post. Scores above 0.5 are considered to be positive and scores below 0.5 are considered to be negative.

A word cloud analysis was also done to understand the strategies that the entrepreneurs and marketers are adopting or planning to adopt for the white goods merchandising. The word cloud highlighted the following words with ascending frequency: (1) Goods, (2) Technology, (3) Dealers, (4) sustainability, (5) virtual, (6) customers, (7) employees, (8) change, (9) home, (10) virtual, (11) reality.

White goods are no longer a status symbol. People believe in the basics these days. Easy to use yet advanced is the new norm. For white goods, dealers must be competitive. They must introduce new promotional strategies to attract customers. People nowadays hardly visit shops physically. Today’s generation is technologically very sound. But at the same time lazy too. They want things on the tip of their finger. Hence, companies should focus on online apps of the white goods companies and dealers with the easy user interface. Sudarshan et al. (2004) suggests that consumer or the customer is the king and what they perceive and their concept of self, their values, culture, and their personal importance describe what would be their buying behavior. The buying behavior of the consumers is influenced by the amount of interest and attention to the marketplace. Makkar and Dhyani (2010) explain that the entrepreneurs, marketers, and business owners should focus their attention to different media vehicles.

Hence, traditional white goods dealers should shift to technology-oriented merchandising along with competitive pricing. Company-owned dealers and franchise owners should take the help of virtual reality and video conferencing (UX and UI platforms) to make the customers experience the store sitting at home. Employees selling white goods should be trained enough technologically and behavior wise to convince customers to merchandise. Change is the only constant. Change brings sustainability. Sustainability brings stability to the business.

Due to the COVID-19 pandemic, the trust that the consumers had toward the marketers and retailers have impacted significantly. One of the strategies to regain this trust is to engage in corporate social responsibility (CSR) activities. CSR activities will not only help the retailers/marketers/business owners to regain the lost trust but also put a step forward to a sustainable future (Magdalena et al. 2022).

Gladysz 2017: suggested a new sustainable method in the white goods industry. This method is implementation of RFID technology in effective decision-making. RFID stands for radio-frequency identification. This technology can be implemented in organizations only after careful analysis as it is quite expensive. But it is simple to use at least for those organizations who do not want to get involved in high end and sophisticated tools of analysis for decision-making particularly in their early stage.

The market for secondhand product particularly in white goods industry is very common. Hence, the white goods manufacturers can think of reprocessing or recycling the written off/used products. The technique of reverse logistics can be a great catalyst in the process which includes acquisition, testing and grading, and disposition/reprocessing of used goods (Lechner and Reimann 2015).

One of most effective sustainable practices that can be adopted by any white goods industry is energy saving. The modern appliances that are being manufactured are more efficient in terms of saving energy as compared to appliances manufactured a decade ago. Like Electrolux, a refrigerator brand began to use vacuum panels as insulation between plastic liner and steel cabinet. The better the insulation, the less energy to pump out (Gross 2019).

52.8 Correlation Analysis and Regression Analysis

The correlation analysis shows a significant relationship between HATKE components and customer perceptions as the p -value is $0.001 < 0.05$. Also, Karl Pearson's coefficient of correlation is 0.67 which means that there is a strong positive relationship between these two variables. Multiple linear regression was performed to find the impact of HATKE components on customer perceptions. The significant value of the ANOVA table of multiple linear regression is less than 0.05, which means that there is an impact of HATKE components on customer perceptions. The R -square value is 0.45, which means that 45% of customer perceptions are explained by HATKE components. Hence, it supports both hypotheses.

However, a multiple linear regression was also performed of the components of HATKE on customers' perception and it was found that health (Beta = 0.357, $p >$

0.05), attitude (Beta = 0.153, $p < 0.05$), technology (Beta = 0.539, $p < 0.05$), knowledge (Beta = 0.258, $p < 0.05$), engagement (Beta = 0.348, $p < 0.05$). Hence, attitude, technology, knowledge, and engagement significantly contribute to customers' perception. Health does not significantly contribute to customers' perceptions.

So, the predicted equation of Y is as follows:

Customer's perception = $a + b1$ (attitude) + $b2$ (technology) + $b3$ (knowledge) + $b4$ (engagement).

Customer's perception = 0.639 + 0.153 (attitude) + 0.539 (technology) + 0.258 (knowledge) + 0.348 (engagement).

52.9 Discussion and Implications

COVID-19 was a global crisis, and it has affected the global economy and dilemma for firms' survival all over the world (Jamal et al. 2021; Mezghani et al. 2021). The customer's behavior affected due to lockdowns during the COVID-19 pandemic have affected customers' behaviors (Donthu and Gustafsson 2020; Pantano et al. 2020; Sirkeci 2020). As the buying behaviors of the customers changed due to the COVID-19 crisis, the firms also need to change their strategies to meet the customer's expectations. In crisis situations and after, the focus of customers has shifted more to the product's durability, and price-sensitiveness, trying to reduce their expenditure by purchasing lower-priced products and focusing on purchasing affordable products.

Fuciu 2020, suggested that effective marketing and practices have a high effect on the success of firms in facing business risks and challenges created due to COVID-19. The current quantitative study also supports the extant literature as there is a strong relationship between HATKE and customer perceptions. The qualitative analysis has also derived strategies like shifting to UI/UX platforms to give customers a real experience of purchasing sitting at remote locations. For that having well-trained staff with technological skill sets is a must. Competitive pricing and branding strategies should also go hand in hand for a sustainable future.

52.10 Conclusion

There was an impact of COVID-19 on every market and on the activities of firms. It was a difficult situation and uncertainties during COVID-19 and after COVID-19 also. To tackle this unexpected uncertainty, the organizations needed to make strategies not only to give competitive advantages but to survive in difficult situations. Accordingly, this study had aimed to answer the questions regarding customers' perceptions of white goods and the sustainability of the white goods sector. The mixed method approach was adopted, and it was found that HATKE components play an important role in explaining customer perceptions.

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Chapter 53

Changes in Top Management and Shift in Strategy—A Comprehensive Study



Deepak Puliyoili

53.1 Introduction

All successful organizations have been keen on adapting to the changes happening to their business environment, including the changes in customer preferences. The scope of adaptation is large and dynamic. While some are changes in strategy, structure, business model, sales channel, and business processes, others are the introduction of new products and withdrawal of existing ones, geographical expansion/withdrawal (Ford and Fiat from India), and adaptation of new technology. This work aims to find answers to the following:

1. How do the new CEO's personality and organizational culture influence the new strategy?
2. Analyze performance outcomes in terms of revenue, EBIDTA, and market share growth after the strategic shift.

Organizations operating in different industries, in multiple countries, or any specific geographical area; large, medium, or small in size; functionality inside the industry such as manufacturer, distributor/wholesaler, retailer/retail chain, service provider, importer, technology developer is all influenced by different market forces and administrative policy frameworks in their respective operating area. The market forces could be competitors, new entrants, the power of suppliers, the power of customers, substitute products (Porter's five forces), technology changes (5G network), and new challenges (for example, the COVID-19 pandemic and the sudden need for vaccines). Policy changes such as moving to Euro VI, BS VI, compulsory

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airbags, orientation for electric vehicles, changes in import tariffs and quotas, sanctions against certain countries (for example, Russia), banking regulations that impact cost of capital (for example RBI in India), other regulatory bodies such as TRAI, IRDAI, RERA (Real Estate Regulatory Authority), Council of European Union, SEC (US) also make a considerable influence on organizations. The entry of strong competitors has also got a considerable impact on the industry. This depends on the scale of operation of the competitor. An example is Reliance Jio Infocomm Limited's market entry in India. Competitors were forced to reduce their tariffs. The industry soon saw an exit of small players and a consolidation of others (Chiraputkar 2020).

Internal settings of organizations also act as forces for change. Organization culture (Caldwell 1991) Professional expectations (hybrid working, gig economy, loose organization structure, self-managing) and attitudes (risk-taking, ambitions, collaborative working, commitment) of human assets, skill sets, remuneration; expectations of the board, resource allocation, access to technology are also important considerations. Depending on culture, organizations set short-term, mid-term, and long-term expectations on its members. While some organizations focus on mid to long-term goals, consistency, and sustainability of the business, others expect the month-on-month achievement of goals. Be it from any functional area. The Constitution of the board has an important role. Boards with more domain experts will likely cause increasing organizational failure (Almandoz 2016). They are likely less receptive to new information, integrating it, and altering decisions. Non-expert directors are less likely to challenge the opinion of experts. Also, this large number of domain experts leads to board overconfidence. Due to all the above three reasons, decision-making is likely less effective. When the board itself is clear and needs proper directions, they are likely to communicate clearly with the CEO, which shall adversely impact the lower spectrum in the organization. CEO's intervention to change the strategy happens in consultation with the board and TMT (Fredrickson 2001a, b).

To remain competitive, organizations would need to continually adjust to the changing circumstances and be in a position to offer products and services of value and relevance. Continuous innovation, cost management, and anticipation are crucial to remaining competitive (Duddy 1999).

53.2 CEO Personality and Power

Organizations influence the personality and traits of employees and vice versa (Chatman 1989). This depends upon the openness of the person to influence. Hence, over a while, people with long experience in one organization or a similar type of organization are likely to develop a particular type of personality and traits. Employees in senior leadership roles, such as CEO with certain dominant personalities (autocratic/transformational), are likely to influence organizations with comparatively weaker systems or lower turnover (revenue) or prominence in the market.

HRM magazine of the UK describes the following six types of CEOs (Tappin 2015):

1. Commercial Executor—Are result focused and business matrices are considered as the measure of success. Focuses on being the best in their industry, continuous focus on attention to detail and are interested in performance management.
2. Financial Value Driver—Focus on creating shareholder value and EPS is considered the measure of success. Value matrix in the industry, focus on transactions and portfolio disposals, views HR as a necessary evil.
3. Corporate Entrepreneur—Has a personal mission. Cash is considered the measure of success. Have something to prove, belief in better way, look for breakthrough opportunities, company is their life, and HR is viewed from hiring and firing perspective.
4. Corporate Ambassador—Society is the focus and market cap is the success measure. Such CEOs got a global mission for societal impact, operates at the geopolitical level and transform industries.
5. Global Missionary—Focus on corporate potential. Got holistic management measures. They got a personal mission to make a significant difference and a corporate mission to take their company to greatness.
6. People Champion—People and culture are the focus. Engagement of people is the success measure. Excellent communicators, warm with strong values, personable and fundamentally believes in people.

CEO power was assessed using seven indicators developed by Finkelstein in the paper done by Margarethe Wiersema and Gregory Bigley (Wiersema 2002). These are:

- (i) Number of titles.
- (ii) Compensation.
- (iii) Stock ownership.
- (iv) Family link to founder.
- (v) Functional expertise.
- (vi) Elite education.
- (vii) Number of outside boards.

Political ideologies and skills of the CEO also make considerable influence on the choice of making strategic changes (Chin 2013). There are convincing studies that confirm that personality and values can be assessed accurately. Five-factor model with underlying dimensions include (1) Extraversion, (2) Agreeableness, (3) Conscientiousness, (4) Neuroticism, and (5) Openness (Caldwell 1991).

Every single organization is unique from a cultural point of view. But, a broad classification of organization is necessary. Organizational Culture Assessment Instrument (OCAI) is a good method to assess organizational culture. Competing Value Framework (CVF) (Quinn 1991) is helpful in understanding the organizational effectiveness. Organisations may be inward or outward focusing. For example, focuses on internal systems, training and collaboration or market focused, listening to customers, customer engagement and the like. The second dimension of CVF is stability versus flexibility. Then comes collaborative or clan culture. This 2 × 2 matrix gives four different combinations.

Internal orientation + flexibility = Collaborate OR clan culture.

Internal orientation + stability = Control OR hierarchy culture.

External orientation + flexibility = Create or adhocracy culture.

External orientation + stability = Compete or market culture.

CEOs could assess the organization culture and plan the strategic shift as per the organization's cultural orientation. Also, this is an opportunity for the CEO to identify the weak cultural areas and link it to the transformation process. This model is not without limitations. This model may not explicitly reveal the informal communication structures, lobbying, power games, departmental wars, and allocation of resources. But, this is a good-enough framework for the CEO to plan and execute.

53.3 Literature Review

CEO has an important role in the transformation and turnaround process in organizations (Lieu 2011). Organizations facing declining performance are likely to consider CEO and TMT change (Tangpong 2021). Turnaround of organizations could be multi-faceted. Problems faced could be many such as sales growth, innovation, production bottleneck, cash flow, employee turnover, employee attitude. Problems could be tackled and organizations could be 'turned around' using multiple approaches such as strategic shift/change/refocusing, process re-engineering, product/service overhauling (discontinuation of some, adding new lines, etc.)

It is said that the CEO succession imposes cost on organizations, which influences short-term performance (disruptive perspective). CEO succession needs time for efforts to manifest, which implies lagged effect on performance (adaptive perspective) (Campion 2017). Insider CEO improves long-term performance and strategic changes are less likely, whereas outsider CEO is more likely to make strategic changes and less long-term performance (Campion 2017). This is observed based on a study of 60 samples from 1972 to 2013 representing 13,578 succession cases. Boards' relationship with the incoming CEO is a critical factor of the governance context that impacts the success of the new CEO (Zhang 2008). Does CEO change or succession bring performance and turnaround? Not necessarily. The performance and turn around depend on factors such as vacancy in primary functional areas (sales, marketing, production) and stability in support functions in the Top Management Team. Strategic change with new TMT and CEO is more likely (Waddell 2010).

It is expected that the board does a clean-up by creating vacancies in primary functions such as sales, operations and marketing. It is often an industry practice that the new CEO bring in his trusted lieutenants from earlier organizations. It is better not to compel the new CEO to make unpopular decisions in the initial stage in the organization by choosing himself to make changes in the TMT team. Other TMT in support functions and staff members across the organization is more likely to feel

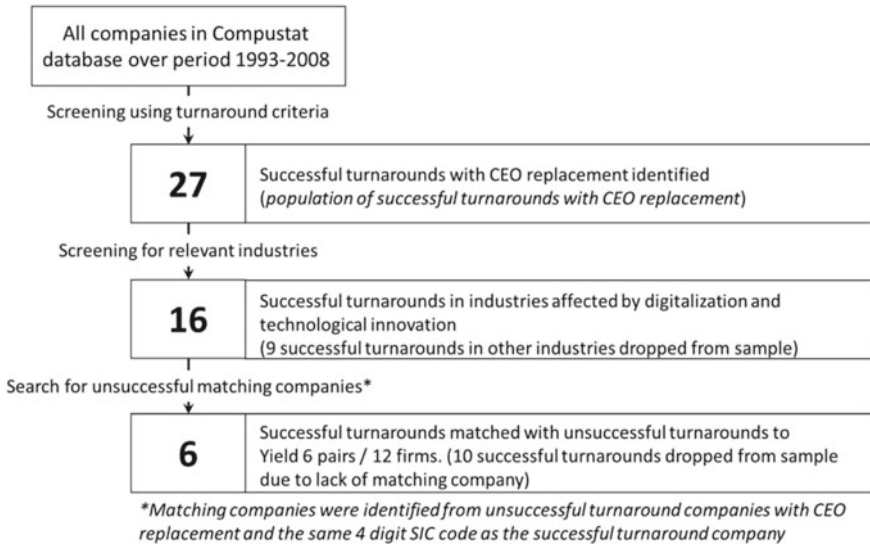


Fig. 53.1 Selection method of companies with successful and unsuccessful turnaround. Tangpong (2021)

uncertainty, friction, disagreement, stress, etc. Also, the new CEO will be able to re-shape the TMT and top structure and effectively implement his turnaround plan (Tangpong 2021).

Six organizations that underwent turnaround were studied by Li et.al. (Tangpong 2021) that were affected by technological innovation and digitalization using exploratory method. The above study adopted Barker and Duhaime's turnaround selection approach (Duhaime 1997) for selection of organizations (Fig. 53.1). This selection method has four stages as given in below (Fig. 53.2):

- (1) Pre-decline phase.
- (2) Decline phase.
- (3) Recovery phase.
- (4) Fluctuation phase.

This study revealed that vacancies in primary functions in TMT before joining of new CEO and stability in support functions after the CEO's arrival made the turnaround successful. On the other hand, replacement in primary/support functions of TMT after arrival of CEO showed unsuccessful turn arounds (Fig. 53.3).

CEO's influence varies across different categories of strategic actions (Stock 2015). Structure–Style (conduct)–Performance paradigm also exists. Various strategic actions and relative importance of CEO across different categories of strategic action are provided in Fig. 53.4 and Table 53.1. Top management develops the firm's agenda on the basis of their own interpretations of their environments, which depend crucially on their experiences, values, and personality (Mason 1984).

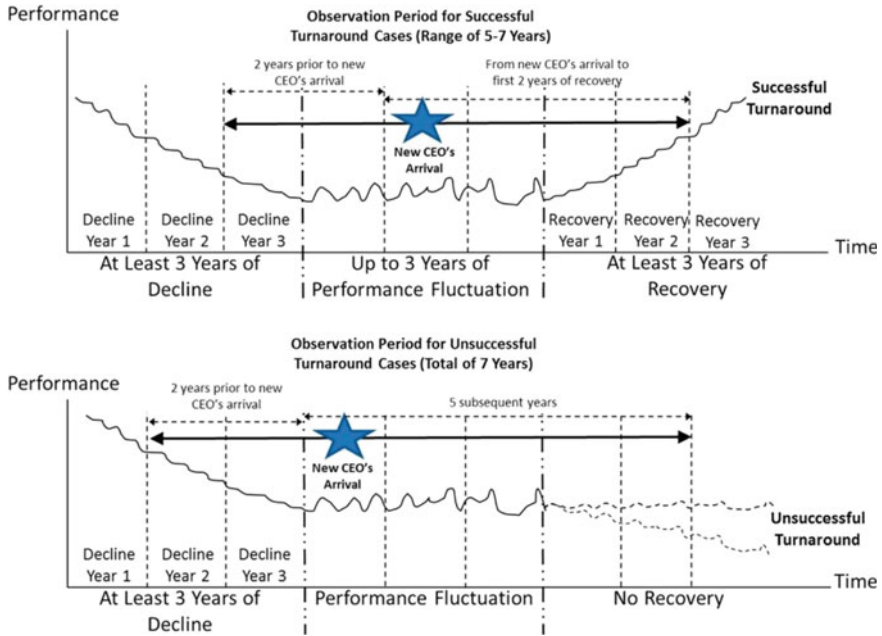
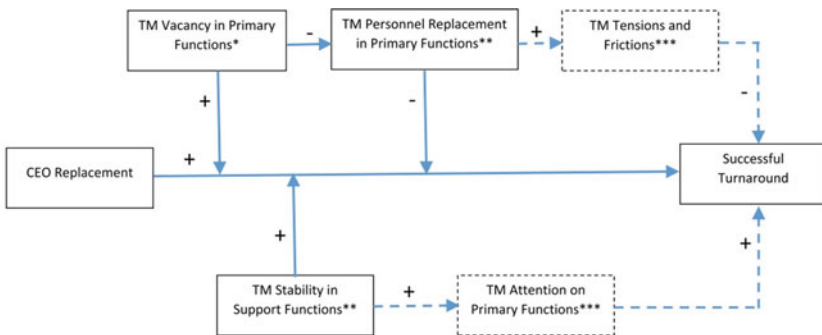


Fig. 53.2 Turnaround Cases. Tangpong (2021)



Notes: * Condition before the new CEO arrival
 ** Conditions created by the new CEO (after the new CEO arrival)
 *** Based on connecting our case findings to the related literature

Fig. 4. Proposed Theoretical Model

* Condition before the new CEO arrival
 ** Conditions created by the new CEO (after the new CEO arrival)
 *** Based on connecting our case findings to the related literature.

Fig. 53.3 Proposed Theoretical Model

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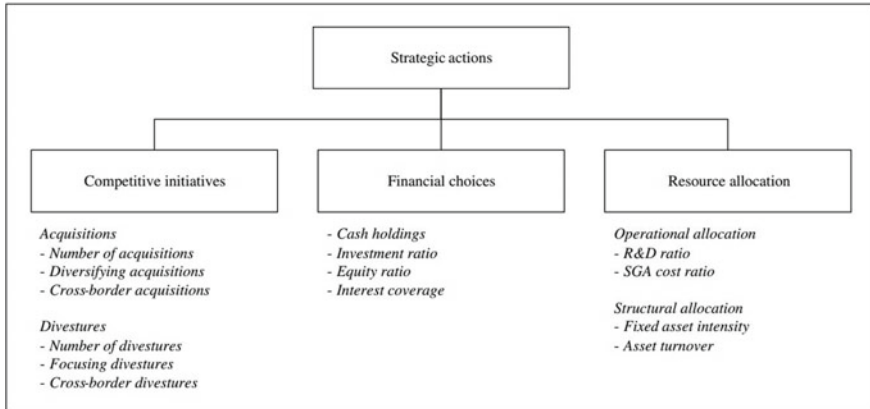


Fig. 53.4 Strategic Actions

CEO has a more pronounced role in comparison to the firm and industry in taking strategic moves (Stock 2015).

Outsider CEOs are more likely to initiate change. Engaging outsider CEO tripled from 9% (1960) to 27% (1980) (Bhambri 2022). In the earlier cited work, twelve propositions have been highlighted indicating the success criteria when new CEO changes strategy:

1. Higher Up (HU) see performance gap.
2. HU/Chairman replaced CEO.
3. TMP anxious, focus new CEO.
4. New CEO first consolidate power.
5. TMT consensus, commitment.
6. External threat.
7. Positive future.
8. New organization structure increases power of TMT.
9. Collective decision-making.
10. TMT favourable demographic.
11. Delegation for dynamism, skill.
12. Motivate lower-level employees.
13. Structured solving of issues.

The implications of the study conducted by Waddell et al. for future theoretical and empirical work on the link between turnover and changes in the firm’s portfolio of operations (Waddell 2010) include the idea that such work should not focus solely on the CEO, which leads to the question “Is the Strategic shift Person Centric? This study used power circulation theory of control by Shen and Cannella.

Table 53.1 Results of simultaneous ANOVA

	Variable	Percentage of total variance				Percentage of explained variance			
		CEO	Firm	Industry	Year	CEO	Firm	Industry	Year
Competitive initiatives	Number of acquisitions	31.31	32.24	8.29	6.91	39.76	40.94	10.53	8.77
	Diversifying acquisitions	28.40	31.58	5.88	4.64	40.28	44.79	8.34	6.59
	Cross-border acquisitions	30.29	32.74	7.48	3.53	40.91	44.21	10.11	4.77
	Number of divestures	37.20	30.24	6.21	4.31	47.71	38.79	7.97	5.52
	Focusing divestures	34.81	25.78	4.94	3.94	50.11	37.12	7.11	5.67
	Cross-border divestures	36.22	25.93	4.76	3.72	51.28	36.71	6.74	5.26
Financial choices	Cash holdings	26.82	36.07	5.80	2.83	37.49	50.43	8.11	3.96
	Investment ratio	20.92	28.62	3.20	2.56	37.82	51.75	5.79	4.63
	Equity ratio	24.18	29.95	1.88	1.27	42.22	52.28	3.27	2.22
	Interest coverage	31.48	39.40	2.44	1.88	41.86	52.39	3.25	2.50
Resource allocation	R&D ratio	8.22	48.22	27.00	3.38	9.47	55.54	31.10	3.89
	SGA cost ratio	9.22	43.40	16.99	1.64	12.94	60.91	23.85	2.30
	Fixed asset intensity	30.76	32.90	19.47	2.23	36.04	38.55	22.81	2.61
	Asset turnover	14.94	37.15	9.60	2.29	23.35	58.06	15.01	3.58

Strategic choices are influenced by the personal background and experience of top managers (Fredrickson 2001a, b). This includes CEOs, examining two dimensions of corporate strategy in this paper: product market diversification and geographic diversification. This study used discrete-time event history analysis to estimate the likelihood of outside succession with Heckman selection model to analyze corporate strategy and CEO experience.

Executive’s demographic characteristics significantly affect strategic decision-making and organizational outcomes—Upper Echelon Theory of Hambrick and Mason (Karaevli 2007). The study investigated the longer-term performance implications and survival prospects of new CEO with different degrees of outsidersness.

53.3.1 *The Tata Sons and Thermax Ltd*

53.3.1.1 An Overview of Tata Group

Tata group, established in 1868, is a well-known name not just in India but across the world. Tatas have a long history and business reputation, excellent track record of serving the nation with proven trust from customers and competitors alike.

Looking back, there is witness to a large number of innovations and new ideas, nobody had even thought of, but Tatas had envisioned and implemented. Steel, Salt, Commercial vehicles, Aviation (Air India was previously owned by Tata), Chemicals, Software, Soaps were just a few segments that Tata group had focused in the 1990s.

However, soon after Ratan N Tata's taking over as Chairman in 1991, liberalization activities started in India. New market opportunities had emerged, and license raj was slowly getting into oblivion. Tata group ventured into passenger vehicles and launched Indica car, Titan watches, and Tanishq ornaments was launched. Also, Tata acquired iconic 160-year-old Tetley group of Briton (now second largest tea brand in the world).

Having said that, it is worth mentioning that when the economy opened up and the group having astounding infrastructure, was a vulnerable target for takeovers. This is particularly so because "Tata trust" had weak shareholdings in different companies. Hence, Ratan Tata developed a capital deployment and reinforcement strategy and planned for divestment of non-core sectors to raise funds to increase stake in more important core businesses.

In 1996, Tata sons held a minority stake of 3%–13% in the group companies. But, after the above-mentioned limited divestment and consolidation of fund, the investment in core businesses rose to over 30% (34.26% in Tata power, 31.64% in Tata steel, and 43.73% in Tata motors) in 2019. The so-called divestments and fund-raising by other financial instruments; leveraging on their infrastructure the group built sufficiently strong financial muscle power to embark on global acquisitions—Jaguar Land Rover, Anglo-Dutch steel-maker Corus in a \$12 billion deal, South Korea's Daewoo Commercial Vehicle Company was acquired by Tata Motors in March 2004 for \$102 million. FNS of Australia for \$26 million was acquired by TCS in 2005. There are among the few successful acquisitions of Tatas.

For such a huge business conglomerate, effective structure and communication were likely to be an issue. However, Tata group formed Group Executive Office (GEO) for conducting strategic analysis and enabled strategic decisions. Meanwhile, Group Corporate Centre (GCC) provided policy support and business reviews. Both are chaired by Ratan Tata has senior executives from Tata business verticals.

Table 53.2 Statistics for Business of Tata

	Turnover (Cr)	PAT (Cr)
1996–17	522.40	43.60
2001–02	502.92	24.02
2002–03	577.45	48.24
2003–04	564.00	54.00
2004–05	941.00	55.00
2005–06	1498.00	123.25
2006–07	2210.00	188.00
2007–08	3245.94	280.78
2012–13	4764.00	350.00
2021–22	6064.00	312.00

While at that, the individual business units enjoyed operational decision-making freedom. This balanced the corporate strategic decisions at GEO and GCC level and operational business decisions at individual SBU level. This two-prone reporting strategy eased the possibilities of bureaucracy and potential crises in such a large group with multiple business verticals, operating across the globe.

Just to put the business of Tatas into perspective, some statistics are appended in Table 53.2 Tata, an Indian origin MNC, comprises 90 operating companies in seven business sectors (communications and information technology, engineering, materials, services, energy, consumer products and chemicals). It operates in more than 80 countries, six continents, exports products and services to over 85 countries, employs 395,000 people (Press release, 2011) Looking at it from a disruptive perspective, Tata steel, which was established in 1907 is one of the top ten steel producers in the world (after acquiring Corus) with 28 million tons per annum (MTPA).

Cyrus Mistry took over as the Chairman of Tata Sons in December 2012 when Ratan Tata stepped down as the Chairman at the age of 75 years. Cyrus Mistry was the single largest shareholder of Tata sons with 18.40%. Later, Tata sons board voted to remove Cyrus Mistry as Chairman on 24 October 2016.

Cyrus Mistry moved to National Company Law Appellate Tribunal (NCLAT) and finally Supreme Court ruled in favour of Tatas. The legal side apart, what prompted the board of Tata sons to expel Cyrus Mistry? Mistry was reluctant to take up the role as he had no sufficient experience to handle such multi-industry, multi-cultural and multi-company set up. Ratan Tata had also tried to convince Mistry to take up the role. In place of the Group Executive Council (GEC)—the highest decision-making body, which had seasoned professionals from the group and members from outside, Mistry appointed a team of young professionals (Madhu Kannan, former CEO of BSE, N S Rajan, former EY). This created friction between the board and Mistry. Tata Motors, Tata Steel Europe and Tata teleservices (DOCOMO) was not progressing

enough. There was a market share drop in Tata Motors. Overall, there was lacklustre performance. Some other issues, such as dealing issues related to DOCOMO, dealing with sick assets in Europe were also there. Only TCS and JLR were performing and contributing. Because of all the above, Ratan Tata was unhappy.

Micromanagement, management and leadership style, and cultural fit were all divergent in the case of Cyrus Mistry. N Chandrasekharan, one of the three contestants in the list of the selection committee, was selected as Chairman. His performance track at TCS and connection with Ratan Tata worked in his favour. The highlights of this case are the strategic reorientations done by Ratan Tata and the success that followed and grounds for expelling Cyrus Mistry.

53.4 Discussion and Propositions

It was discussed in the section above that each CEO type has specific orientation and focus. Also, the seven characteristics that strengthen the formal power of CEO are different in different organizations and settings. Literature review throws light into the areas of insider/outsider succession and likelihood of strategic shift, the organizational clean-up in TMT prior to new CEO arrival, areas of strategic focus by CEO—acquisition, divestiture, financial choices, resource allocation, demographic characteristics etc.

Based on the above, the following propositions are brought up:

Organization's desire to achieve large-scale growth, attempt to mitigate potential future threats, board decisions, and CEO's own intentions positively influence the strategic change.

CEO personality, traits, and functional expertise developed by past working and credibility positively influence the strategic initiative and strategic choices.

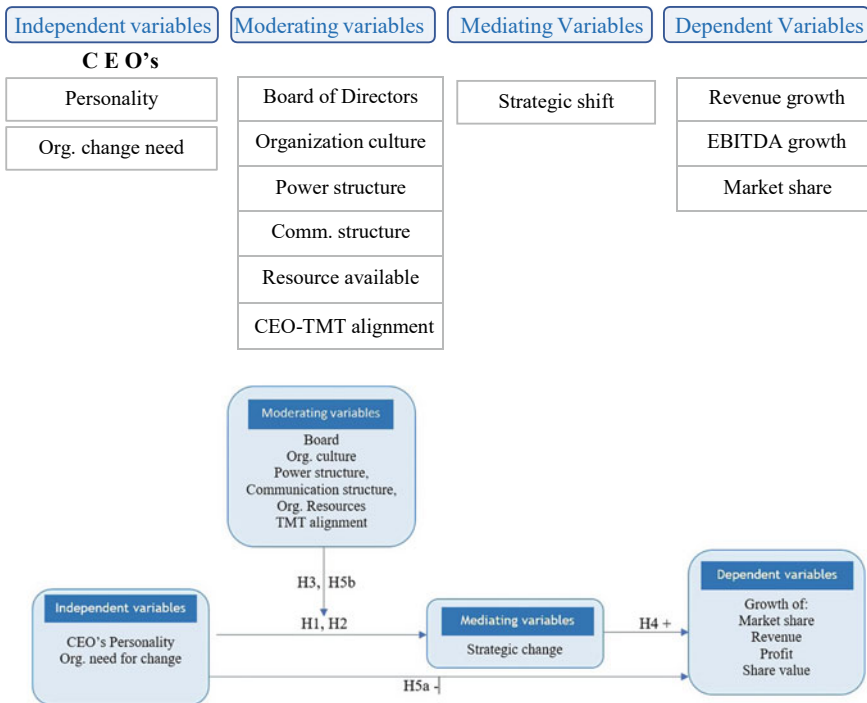
CEO's strategic initiatives are moderated by Org. culture, politics, power structure, communication structure and organizational resources.

Successful strategic shift brings positive growth in revenue, profit, and market share.

CEO organization misfit, lack of understanding about competitive environment, mismatch between organization's resources and capabilities, and new strategy negatively impact success through strategic change.

Misalignment of CEO and TMT for new strategic direction negatively influences the success through strategic change.

CONCEPTUAL FRAMEWORK



CEOs are moulded in the respective organizations they have worked previously. The functional expertise, educational background, intrinsic personality type, and style are also strong influencing factors for the CEO to make strategic interventions. This includes the ability to consolidate power and position himself as an appropriate leader to lead the organization to success convincingly across the organization and especially at the board level plays a key role. His success in past organizations and proven skills and expertise in steering previous organizations to the desired outcome improve the credibility and dependability. However, the size of the current organization and the size of the firms the CEO has worked before also play a key role in establishing initial buy-in. CEO coming from larger organizations to smaller organizations are likely to be accepted on face value and vice versa. Organization's current state of affairs like the unavoidable need for a quick transformation. Example of General Motors, and Chrysler US in 2008–09 (Krueger 2015). Organizations resort to change the CEO and TMT for a number of reasons. Consistent poor performance, person–organization misfit, further develop competitive advantages, faster growth and mitigate future risk potential are some of the reasons. A proper fit of the CEO and organizational change need to act as the right ingredient. However, the mediating factors can positively or negatively impact the outcome. If the CEO's work style

is autocratic and the organization culture is predominantly democratic, then it is possible that this particular misalignment will have a negative impact. Likewise, in some organizations, there are two communication channels—one is the official channel and the second being the personal communication channel. Employees at lower level and higher level interact and get things executed via both channels of communication. However, some organizations rely on and allow only direct-official channel of communication. Such differences in communication channels and power balances are likely to impact the working of the new CEO.

However good the CEO be, strategic options shall be depending on the organizational resources. Petronas Lubricants (India) Pvt Ltd. (PLIPL) used to contract manufacture all its' products in India except a few top line niche products (direct import from own overseas factories). They lacked the volume initially to set up their own plant. Contract manufacturing added to their product cost. PLIPL managed with less profit margin until it established a consistent and robust sales volume. In 2013, PLIPL set up its' first blending plant in India (ET Bureau 2013). The plan in the case of PLIPL was clear. They wanted to build a sufficient enough volume with less profits to set up their plant. Once the plant was set up, they could tap the scope of reduction in production cost that makes up for profit growth. However, for this sort of long-term strategy, there must be clear alignment of CEO and board. This strategy negatively impacts shareholder returns for many years, at least until the plant is set up.

CEO-TMT alignment is very important in making a successful strategic transformation in any organization (Waddell 2010). In the interest of the firm, some of the successful models suggest that the board creates vacancies in primary functions before the arrival of new CEO. This is complemented by the consistency and continuation of TMT at support functions.

Turning around of organization by strategic shift is visible over a period of years. Effects of implementation of alternate strategy usually take two to three years depending on the scale and depth. Successful organizational turnaround will show growth in revenue, EBITDA, and market share, among other factors. This holds true in case of organizations with declining performance and organizations with growing revenue, EBITDA, and market share. In the case of the second category, the incremental growth shall be measured over the preceding three to four years before the new CEO's arrival.

53.5 Limitations and Conclusions

This paper used a conceptual model. The findings of this study could not be applied universally for organizations based in different parts of the world and industries alike as work culture in different countries are not the same, industries, organizational values, structure and business models are different. Future research could be undertaken to explore the applicability of this model in other country settings.

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Part XIII
Leadership

Chapter 54

Well-Being and Employee Performance—Research Insights from a Bibliometric and Thematic Perspective



Shipra Pandey and Jayashree Mahesh

54.1 Introduction

Organizations are focusing more on well-being-oriented human resource practices to enhance employees' individual performance as well as organizational productivity. In recent times, there has been substantial research on the topic of well-being in the field of management, social sciences, and psychology. The World Health Organization (WHO) defines well-being as “*a state of complete social, physical, and mental well-being, not merely absence of disease or infirmity.*” Changes in the work environment and technology affect work-related well-being. However, some of these changes are positive and provide opportunities for employees to have great access to information and work from home, while other changes present challenges to their well-being. The work pressure to perform better has increased and this results in high stress and health-related issues in the employees. The well-being of the employee plays a crucial role in improving the performance of the employees (Khoreva and Wechtler 2018). Due to these aspects, the relationship between well-being and employee performance has become a topic of interest among researchers. This relationship is studied both theoretically and empirically. The higher the well-being of the employee, the higher will be the performance (Salas-Vallina et al. 2020).

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Various data-driven and theoretical studies have been conducted in this area of well-being and performance, and some of these studies highlight the effectiveness of well-being, the role of well-being-oriented HR Practices, and factors that influence well-being and performance. A large number of studies on well-being and employee performance makes it challenging for researchers to create a comprehensive overview of the topic. Many research studies published in various journals make it tedious to identify the studies that are instrumental and highly quality-driven. To identify the research patterns in this abundance of literature, a bibliometric analysis is used where researchers can identify and explore insights in this area. There is scarce bibliometric research reported to date that shows the correlation insights between well-being and employee performance. Therefore, this study has been performed to (a) identify the number of publications related to well-being and performance, (b) through a bibliometric analysis list of the most-cited journals in this field, and (c) to identify the thematic trends of research in this area.

According to Donthu et al. (2020); Vallaster et al. (2019), the bibliometric review focuses on the research statistics related to the year of publications, author, and journal of publications thereby offering insights into a topic. It gives information through an analysis of top-cited journals, citations, and the important keywords of the area. It helps us to identify the important countries that are focusing on research in a particular area of study. The thematic analysis used in this study involves a four-step approach as suggested by Seuring and Gold (2012). These four steps are material collection, descriptive analysis, category identification, and material evaluation. Thus, by keeping in mind the importance of bibliometric and thematic analysis, this paper focuses on the following research questions:

- (a) What are the trends in “well-being and employee performance” research publications?
- (b) Which countries made the biggest contributions to the research’s publication?
- (c) What are the most used keywords in the research relating to “well-being and employee performance?”
- (d) What are the top-cited journals in this study area, their impact factors, and the number of articles published in these journals?
- (e) What are the major themes of the articles identified through the thematic analysis in this research?

It is believed that investigating the keywords, most-cited countries, and journals leading the development in the area is an important and beneficial activity. The results of this study will provide insights into current research status and trends regarding the correlation between “well-being and employee performance”.

The findings show that the well-being-oriented HR practices, work environment, work–family conflict, quality of life, technology, nature of work, and organizational support play a crucial role in enhancing well-being and work performance.

54.2 Methodology

In this study, bibliometric analysis has been performed in order to achieve our research objectives. The researchers have taken the literature from the SCOPUS database for the last three decades. Scopus has a wider range of subject areas, making it feasible to search for better journals based on the area being reviewed (Paul et al. 2021). A SCOPUS database electronic search was carried out on August 24, 2022, using the term “Employee Performance” AND “Wellbeing” OR “Well-being.” The search result of 217 articles was obtained and analyzed using VOSviewer with keyword occurrence network and country-wise citation network. With this bibliographic study, the top 20 journals have been identified based on their citations. Out of the 217 research articles identified for this study, 44 were used in this thematic analysis based on the top 20 journals. In the final stage, the insights and implications of the themes identified have been discussed in this study.

54.3 Results

The results of this study are presented from the bibliometric and thematic perspectives (Fig. 54.1).

54.3.1 Bibliometric Analysis

First, research articles are graphically analyzed based on their year of publication for the purpose of concision and ease of inference. Figure 54.2 shows the total number

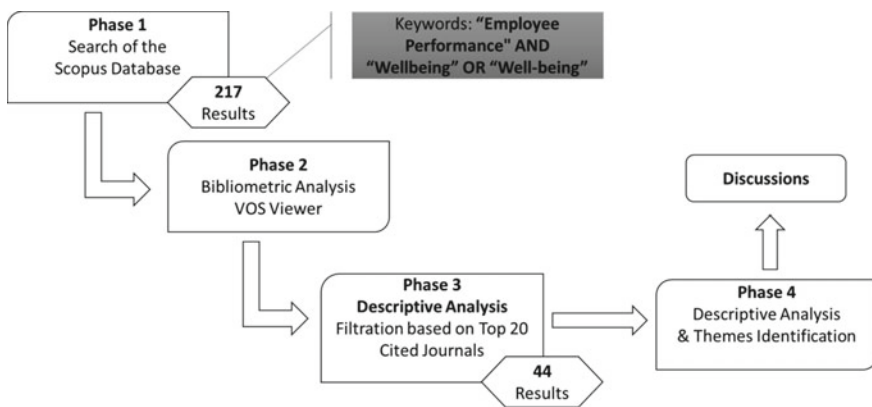


Fig. 54.1 Methodology

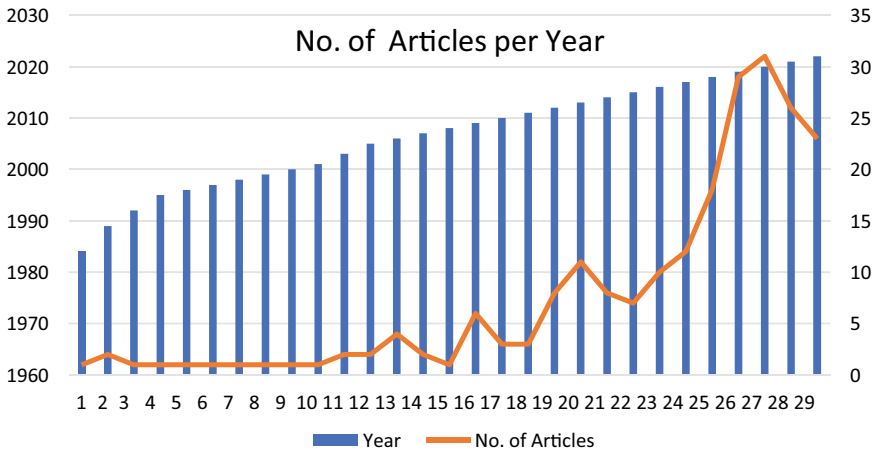


Fig. 54.2 No. of articles per year

of studies published between 1984 and 2022. The number of publications followed a similar pattern until 2012 with some fluctuations and their number varied between 1 and 8. It has been observed that from 2013 onward, the focus on this topic has increased and followed exponential growth until the year 2020. Most numbers of the research in the field of employee performance and well-being were published in 2020, i.e., 31 research studies. As seen in Fig. 54.2, the timeline for 2021 and 2022 showed a slight decrease in publication trend and one of the causes for this can be the pandemic across the world.

In Fig. 54.3, the contribution of the countries is shown. The figure only includes those nations that collaborated with other countries in the publication of the chosen articles because they also had the highest contribution rates.

Table 54.1 shows the top 20 most-cited countries. While the top countries have fewer publications, they have more citations as a result of the high quality of their work, which has drawn scholars to use their results and insights. In the Indian setting, there are a respectable number of works but the relatively low number of citations which suggests scope for quality improvement.

According to Zhang et al. (2019), the top authors’ keywords may provide clues about the areas of interest and research goals of scientists and researchers in the discipline. By keyword analysis, one can find the literature themes. Therefore, the researchers’ next step was to correlate literature using article keywords. As shown in Fig. 54.4 and Table 54.2, 30 keywords were identified based on their occurrence in the 217 articles. This analysis shows that the keyword “Employee performance appraisal” and “Job satisfaction” has maximum occurrence as they might be used as the outcome of “Employee performance” and “Well-being”. The interlinking lines represent the strength and significance of these keywords.

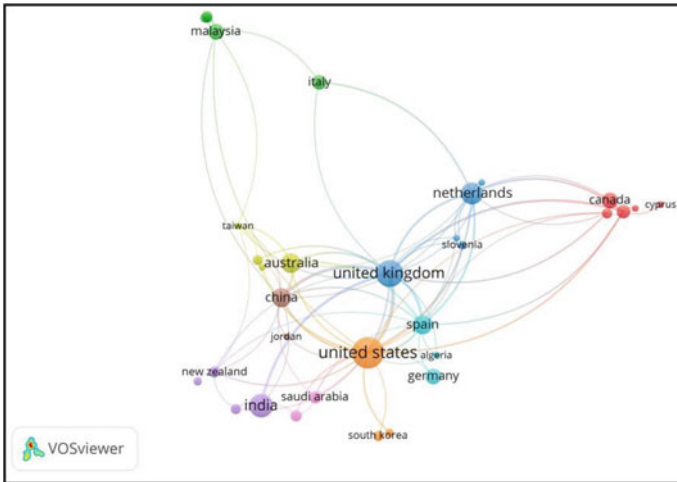


Fig. 54.3 Country-wise publication network

Table 54.1 Country-wise articles and citations

Sr. No.	Countries	No. of articles	Citations
1	Italy	7	651
2	China	14	607
3	South Africa	1	535
4	France	3	424
5	Ghana	1	200
6	UK	32	170
7	Taiwan	1	169
8	Estonia	3	122
9	Lebanon	1	109
10	Saudi Arabia	5	95
11	Israel	1	91
12	Lithuania	3	91
13	South Korea	3	91
14	India	24	69
15	Denmark	3	62
16	New Zealand	4	57
17	Ireland	1	56
18	Sweden	3	23
19	Thailand	1	21
20	Mexico	2	16

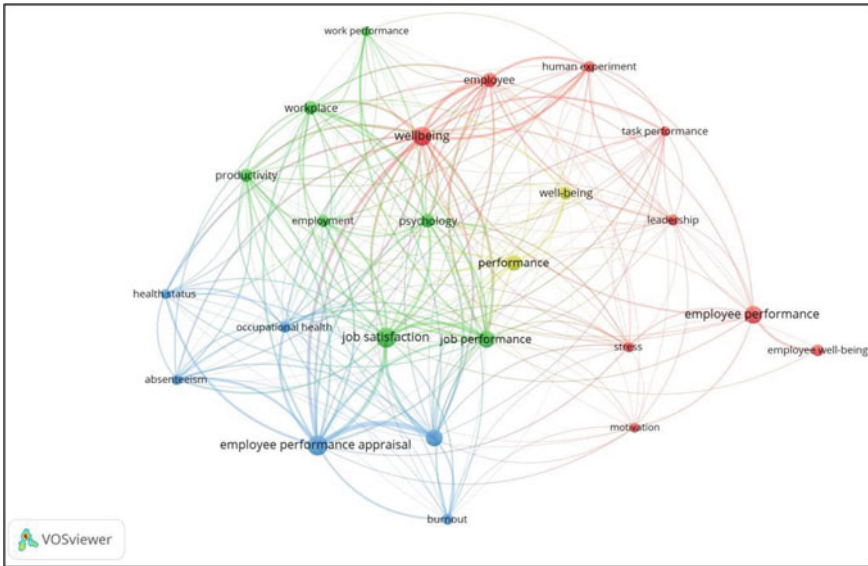


Fig. 54.4 Keyword co-occurrence network

Table 54.2 Keywords based on the occurrence

Sr. No.	Keyword	Occurrence	Sr. No.	Keyword	Occurrence
1	Employee performance appraisal	43	2	Job satisfaction	43
3	Well-being	38	4	Employee performance	34
5	Job performance	32	6	Personnel management	32
7	Performance	26	8	Employee	23
9	Psychology	20	10	Workplace	20
11	Productivity	19	12	Well-being	19
13	Employee well-being	15	14	Employment	15
15	Burnout	14	16	Occupational health	14
17	Human experiment	13	18	Leadership	13
19	Absenteeism	12	20	Stress	12
21	Health status	11	22	Task performance	11
23	Motivation	10	24	Work performance	10

After analyzing 217 articles, 24 keywords used in these studies were identified. The filters used for this networking were based on the VOSviewer’s “10 minimum number of occurrences of a keyword” rule. The 24 keywords are listed in Table 54.2.

In the last stage of the bibliometric study, the journals of the articles as per their citations were categorized. Then, these 20 journals with 44 articles from selected literature were selected for descriptive analysis. Table 54.3 lists the journals according to their 2-year impact factor and number of citations. As shown in Table 54.3, the Journal of Occupational Health Psychology is leading in citation and articles, whereas the Journal of Management has the highest number of impact factors despite the lower number of articles published. These citations and impact factors show that the mentioned journals provide high-quality research content and are currently acting as an active research hub in the field of “Employee performance and Well-being”.

Table 54.3 Journal articles and citations with impact factor (top 20 based on citations)

Sr. No.	Journal name	No. of articles	Citations	Impact factors
1	Journal of Occupational Health Psychology	6	1069	7.707
2	Journal of Applied Psychology	5	895	11.802
3	Journal of Management	1	632	13.508
4	Human Resource Management Journal	5	361	5.667
5	Journal of Business Ethics	1	345	6.331
6	Mindfulness	1	162	3.801
7	Human Resource Management	3	156	6.235
8	Leadership Quarterly	1	155	9.924
9	American Journal of Health Promotion	2	129	2.956
10	Journal of Occupational and Organizational Psychology	2	121	5.119
11	Employee Relations	3	116	2.248
12	International Journal of Nursing Studies	1	104	6.612
13	Journal of Occupational and Environmental Medicine	3	102	2.306
14	American Journal of Community Psychology	1	90	4.019
15	Journal of Psychology: Interdisciplinary and Applied	2	85	3.36
16	Journal of Service Management	2	76	11.768
17	Schizophrenia Research	1	70	4.662
18	Human Performance	1	64	2.972
19	International Journal of Hospitality Management	2	62	10.427
20	Leadership and Organization Development Journal	1	62	3.923

54.3.2 *Thematic Analysis*

In this study, the researchers have used the thematic analysis approach to analyze the articles. To provide a framework for the current trends, a four-step process has been involved which is identified by Seuring and Gold (2012). The four steps are material collection, descriptive analysis, category identification, and material identification.

Material Collection: The material collection included the actual literature to be analyzed. In phase 3 of our study, 44 articles from the 20 top-cited journals were identified.

Descriptive Analysis: In this step, information that covers the characteristics of each literature from the various journals is assessed along with the dimensions. An Excel sheet was created to collect the information from the 44 articles to be reviewed. The following information was captured from each article: (1) title, (2) year of publication, (3) author, (4) research method (5) themes.

Category Identification: The themes were categorized using MS Excel. The following seven themes were emerged in this step:

- Well-being-oriented human resource practices (WBHRP).
- Nature of the job.
- Organization support.
- Work environment.
- Quality of life.
- Work–family conflict.
- Technology.

Material Evaluation: The last step involves analyzing the articles, identifying the key insights, and interpreting the results. The findings from this step are given below.

54.3.2.1 **Well-Being-Oriented Human Resource Practices**

Based on this theme area, 12 research studies were identified. According to Ogbonaya and Messersmith (2018), human resource management practices are organizational structures that make it apparent to employees what the company expects of them. Employees see these cues as favorable treatment from the company and respond favorably at work by adopting good attitudes and behaviors. Additionally, well-being-oriented HR practices can improve individual performance by enhancing staff happiness (Salas-Vallina et al. 2020) and help in the development of resilience in the workplace (Cooper et al. 2018). Therefore, encouraging a safe work environment where employees feel that the company values them in the long-term; fostering participatory decision-making processes; investing in training and coaching programs where employees feel more capable and skilled; encouraging information sharing; and enhancing two-way communication and a high-quality relationship between leaders and followers will improve employees' well-being. According to

Kooij et al. (2012), there are two types of HR practices, one is development practices like training that help employees to reach higher levels of functioning and the second is maintenance HR practices like performance appraisal that helps the employees to maintain their current functioning level in the face of new challenges. The literature also showed that age plays a major role in strengthening relations between developmental practices, maintenance practices, and well-being.

54.3.2.2 Nature of the Job

The nature of the job plays a crucial role in the well-being of the employees which in turn may influence employee performance. Seven articles were identified based on this theme. Studies have found that the quality and stability of work are crucial factors in work well-being relationships. The best definition of the nature of an employee's work can be given as the type of work an employee performs. This can be referred to as the day-to-day basis tasks and activities carried out as part of the job and other non-routine tasks that may be required. According to Dall'Ora et al. (2016), the employees working night shifts have low job satisfaction, and therefore, it is important to give them timely breaks which will reduce their fatigue. Apart from this, work re-design investment is required in a job that has a high level of uncertainty in order to achieve performance and well-being (Leach et al. 2012). If the organization focuses only on the job and work attitude, this may lower employee engagement (Robertson et al. 2012) and performance. Therefore, it is important to put prime focus on the well-being of the employee. Additionally, lean production has a negative effect on perceived job characteristics like participation in decision-making, job autonomy, and skill utilization which impacts the psychological outcome of employees (Parker 2003).

54.3.2.3 Organization Support

In this study, seven articles based on this theme were identified. According to Ford et al. (2017), moral emotions like gratitude and anger of an employee toward the organization are indicators of well-being and it plays a moderating role in the effects of organizational support on employee performance. Perceived organizational support is important for the employee's positive orientation toward the organization, well-being, and performance (Kurtessis et al. 2015). According to Neves and Eisenberger (2012), management communication is positively associated with the temporal change in perceived organization support and it also affects performance as it signals that organization values the contribution of the employees and cares about their well-being. Therefore, the organization should invest in the trust of the employees, by clearly defining structures, roles, and guidelines. Additionally, supervisor mindfulness is favorably correlated with employee well-being and citizenship behavior and in-role performance (Reb et al. 2014).

54.3.2.4 Work Environment

On this theme of work environment, six papers were identified. The work environment and working conditions can affect the well-being and performance of the employee. According to Ronda and De Gracia (2022), aesthetic attributes are important in making decision related to job choices. It has also been found that a high-performance work system can lead to bullying and employee intention to leave (Page et al. 2018). Therefore, management must try to combat the growth of workplace bullying through their human resource management policies and practices, while also promoting favorable workplace cultures and climates. Additionally, work engagement at team levels increases the enthusiasm and motivation of the employee and that has consequences on the employee's performance and their well-being (Costa et al. 2014). According to Wegge et al. (2008), gender composition also affects the group performance as a group with a high number of female employees reported more health disorders than the diverse teams. Therefore, gender diversity acts as a determinant for health and performance at work.

54.3.2.5 Quality of Life

Five studies on the quality-of-life theme were observed. According to Abraham et al. (2019), high blood pressure, unhealthy diet, and poor emotional health have a greater contribution to productivity impairment. Therefore, it is important for the organization to focus on the quality of the life and the spirituality of the employees as it is found that spirituality provides sense of purpose, meaning, and interconnectedness at work (Karakas 2009).

54.3.2.6 Work–Family Conflict

Work–family conflict occurs when there is an incompatibility between the job and the family roles. The modern working environment is defined by work assignments that are extended to personal time and employees are expected to handle many obligations while maintaining optimum productivity. Studies on the effect of work–family conflict on employee well-being found that people are more likely to experience stress when their job and personal lives are not harmonious. Five papers were identified on this theme. The research has revealed that childhood and early socialization experiences (Vîrgă et al. 2019) play a major role in shaping the employee's behavior and such behaviors in the future may impact the well-being of an employee. According to Ohu et al. (2019), when job demand is high and autonomy is low, it leads to stress and a decrease in the performance of the employee. Additionally, female employee experiences more role conflict than males; therefore, it is important for the organization to design more family-responsive policies for women (Greenberger et al.

1989). The organization should also focus on a positive wellness program that will be useful in improving employee perception of their increased personal time and wellness without sacrificing their performance (Bray et al. 2017).

54.3.2.7 Technology

Technology can be used as a medium to enhance the well-being and performance of the employee. Based on this theme, two articles were identified. Artificial intelligence can be used as a tool to identify emotions and stress, especially in the service sector (Bromuri et al. 2020). However, the employee feels reluctant to accept the new technologies which leads to conflict (Abraham et al. 2019). Therefore, the organization should consider the employee interest and well-being which will improve acceptance and performance.

54.4 Discussions and Findings

Well-being-oriented HR has been the focus for employers with regard to the issues occurring in organizational settings. In the thematic analysis, it has been seen that most of the literature is related to the themes of well-being-oriented human resource practices followed by themes on organizational support and the nature of the job. The articles on well-being-oriented HR practices have shown that in the public sector, the HRM practices aim more on equal opportunity, whereas the private sector makes more use of the performance-oriented HR practices. By focusing more on performance, the employee's level of stress and unhealthy lifestyle also increases which automatically leads to decreased performance in the workplace. Thus, it is vital for organizations to be aware of the well-being need of their employees and accordingly frame their practices. By providing healthy employment relations to the employees, they perceive that the organization values them by setting a participative culture and providing effective training, which in turn will improve the employee's individual performance. From the literature on the "organization support" theme, it is observed that the senior management role is evidently important for the well-being-oriented initiatives in an organization. It is crucial for organizations to invest in raising levels of trust in the employer, and this can be done by clearly defining the structure, guidelines, roles, and procedures. This will give directions about the behavior which is acceptable at work. The articles on the theme "nature of the job" indicate that it is important for the organization to pay attention to the behavioral components of the job. It becomes more tiresome when job nature involves odd work shifts like night shifts and can prove stressful for the employees. Therefore, the organization should keep in mind to include "we time," "board game events," and other recreational activities while designing the jobs.

Apart from these observations, there are four other themes identified which are work–family conflict, work environment, quality of life, and technology. In many cases, organizations could not recognize the underlying cause behind the productivity of employees and their job performance. In such cases, understanding the antecedents of employee work–family conflicts will allow companies to design favorable conditions and foster a positive mental state for employees. Literature indicates that work–family conflict situations can be managed by concentrating on the problem itself while coping with the conflict. Additionally, these articles also suggest that during high job demands, employees especially female employees go through a high level of stress and role conflict. This leads to work–family conflict and impacts their work performance. Thus, there is a crucial need for work–family enrichment initiatives. Additionally, since employee performance heavily influences how well a company’s objectives are achieved, it is critical to create attractive work environments that encourage individuals to perform at their highest levels. The study suggests that the organization should also demonstrate aesthetic attributes during the recruitment process to attract talent. Strict policies should be in place against bullying and other activities which create a mental disturbance. It is desirable that the employer should track the health status of their employees with the help of modern technology tools like artificial intelligence and should design customized health programs to enhance employees’ well-being and productivity. To ensure proper employee well-being in the workplace, now companies started implementing innovative technology measures. To give an example, Economic Times has published an article on a US-based company, Emotiv, which has now introduced brain earbuds that use small metal disks and electrodes that communicate with brain cells when mounted on the scalp, paving the way for several kinds of information.

The seven categories identified in the thematic review are particularly important as they offer practical scenarios of what an organization can do to increase their employee performance by paying attention to their well-being. Although the impact of well-being on employee performance has been studied in the literature, research in developing countries remains limited. Additionally, literature shows that the Indian subcontinent needs more focused research in technology-driven well-being-oriented HR practices and this can be a future research potential for the researchers in this area. This study provides an enhanced understanding of the correlation between employee well-being and work performance. Creating awareness for employees around the availability of well-being-oriented HR practices to engage and utilize organizational and job resources leads to a higher level of engagement and greater well-being. The strength of this mixed method study, i.e., bibliometric and thematic analysis, lies mainly in its attempt to understand and gather insights about the well-being of today’s new-age employee workforce.

54.5 Conclusion and Recommendations

The well-being of an employee has been considered as an important component in employee performance research. In this study, bibliometric analysis has been applied to study literature published in this area, examine the related keywords, and identify the research themes. The following are the contributions to this study. First, the recent trends were identified in the publication of “well-being and employee performance” research. Second, the countries identified that contributed most to the publication of the research. Third, the keywords were identified through bibliometric network analysis. Fourth, the articles from 20 top-cited journals were categorized into themes. Fifth, with the help of thematic analysis, the themes and provided key insights were identified.

From the findings of the study, it has been observed that many influential research works have been published after 2013. The geographical analysis revealed that Italy with seven publications has made the greatest contribution to the most-cited publications in this area. However, even after publishing 32 articles, the UK is in sixth place and India with the second-highest number of articles is in 14th place which shows the scope for quality improvement. Additionally, the keywords were identified using network analysis, and “employee performance appraisal” and “job satisfaction” appeared the highest number of times. In the next step, the “Journal of Occupational Health Psychology” is identified as the most-cited journal. The VOSviewer software is used to map the findings in order to visually support the results from the Scopus database mentioned above. By using this software, the researchers have visualized the keyword co-occurrence, country networks, and thematic analysis.

Based on the 44 articles from the top 20 most-cited journals, the thematic analysis was performed and seven themes were identified which includes nature of the job, well-being-oriented human resource practices, work environment, technology, organization support, quality of life, and the organization support. This thematic analysis provided key insights about the study for future researchers and for the organizations to frame their policies and HR practices by keeping in mind the various factors that impact employee well-being and lead to their workplace performance.

This bibliometric mapping of wide-ranging studies on “employee performance and well-being” has revealed crucial results about the keywords, journals, and countries. Hence, this study will offer crucial knowledge to researchers interested in this subject regarding the critical keywords, themes, and publication areas. These findings also enrich the knowledge base of well-being by providing an overview of the existing knowledge.

54.6 Recommendations for Organizations

1. Organizations should invest more in training, coaching (Salas-Vallina et al. 2020), and opportunity-enhancing HR practices (Khoreva and Wechtler 2018) by focusing on the well-being of their employees and by using innovative technological means to improve their work environment.
2. Organizations should focus on increasing organizational resources like trust, support, participation, and building a constructive employer–employee relationship as it will directly influence their citizenship behavior and work performance (Reb et al. 2014).
3. Work environment should be free from bullying or any disturbing activities and strict guidelines should be formulated to instill trust in the employee’s minds about their workplace.
4. Organizations should introduce wellness programs and team activities to improve the quality of life of employees and to keep the workplace interesting.

54.7 Recommendations for Academia

1. As per Table 54.1, India has published the second-highest number of articles in this study area, but the citation count is only 69. This shows the need for quality research work that can get published in top journals in this field.
2. Research should be done by integrating technology with well-being and performance as every organization is now moving toward technology-driven HRM.
3. Majority of research is focused on conventional workplace-oriented practices. But recently almost half of the world started working in a hybrid manner, i.e., work from home/anywhere. This demands more research in this hybrid workplace domain.

54.8 Limitations

This study has few limitations, and only 20 top-cited journals were included in the thematic analysis. Perhaps, this shows an incomplete view of the existing scenario. The other less-cited journals may include good-quality work. The data used in this research are derived from the Elsevier Scopus database, a source from a single database can be an additional limitation for the study. Thus, other databases like the Web of Science, Google Scholar, Ph.D. theses, industry reports, etc. can be considered. In addition to this, the researchers have chosen the keyword related to well-being and employee performance. The keyword considered for this research may not be fully comprehensive. Different keywords’ search may produce different networks which can be differently interpreted. Additionally, an approach to categorizing the

articles into themes is purely subjective thereby leading to multiple interpretations. Thus, further research is needed on this aspect. The well-being-oriented practices that an employer can undertake in their organization identified and discussed in the paper can be used to assist employers, decision-makers, and others to increase individual as well as organizational performance.

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Chapter 55

Testing the Role of Work–Family Interface Between Zoom Fatigue and Well-Being: A Study of Academic Moms in India



Sheema Tarab

55.1 Introduction

The recent novel coronavirus affected the world globally and constrained the physical movement of people from one place to another. The sudden announcement of staying in a lockdown pushed the worldly system to a pause, owing to such a curb, the emotional and psychological concern in human augmented some new-fangled challenges and realities. Gradually, the work mode recommenced with the usage of networking, and Internet. Initially, the government and many of the employers recommended the use of videoconferencing tools as an indispensable method to resume work. There were many platforms that were adopted by organizations like Zoom, Microsoft teams, Google Meet, etc. to continue work and organize meetings and events. The recovery phase of lockdown that resumed virtually had normalized teleworking for teachers in schools and universities as a new way of work (NwoW). Recognizing and appreciating the need of the hour, teaching faculty not only adapted to technology usage to continue classes online but also make numerous attempts to enhance pedagogy in the most effective way. But this shift has pressurized the academia to get exposed to technology like never before and undergo its binding effects. Along with several virtual opportunities to learn and grow, the budding challenges include (un)availability of resources like Internet connection, bandwidth connectivity, availability of gadgets and equipment, in addition to the increased workload, relational conflicts, exposure of high screen time, anxiety, exhaustion, etc. The term ‘Zoom fatigue’ gained momentum simultaneously, and workers are re-counting the increasing personal, professional, and psychological demands of using technology in comparison to the demands of face-to-face (F2F) meetings and

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contacts. Zoom fatigue is a state of tiredness, slowdown, and restlessness felt by individuals as an outcome of over usage of VC tools. While distant teaching has been practiced and researched for a while now, this massive radical move to online education is not only quantitatively but also qualitatively different. The key differentiator in new workplace is the role of technology, and given the speed at which this forced transition has taken place, there are many general questions that are perplexing both individual faculty and management teams of higher educational institutes, including: *What are the implications of this transition for the stakeholders involved?* Corporate perspective on how to combat zoom fatigue is deliberated but impacts on academia calls for scholarly attention. Here in this study, we would focus on the working moms in academics facing such challenges. Their propel is twofold as work and life are two extremely significant facets of an adult's life, and both of these seem to be imbalanced during the recent past. During lockdown, the restriction of physical movement, maintaining social distance, and taking utmost precautions have increased the responsibilities of individuals' manifolds. In addition to such safety measures, the workload also had increased for two reasons, first it was adapting to a new system of work in which completely technology is the major player, and secondly, it was difficult to ensure the consistency and readiness in students to join classes and ensuring their class engagement. Simultaneously, the working hours got clashed with household chores and family interference due to which the exhaustion level is expected to rise. In other words, the unprecedented Covid crisis caused an environment of fatigue, exhaustion, and boredom (Shoshan and Wehrt 2022).

Considering the unprecedented scenario, in the post-COVID situation, the organizations agree and believe that well-being in human is extremely significant for their positive functioning and thus are looking for strategic solutions to engage their employees better and understand the challenges of resuming back to normal. The shifts of going virtual from a face-to-face work scenario, and now vice versa, this transition is in itself composed of psychological and emotional turbulences. During Covid, the mixed experiences of fear, anxiety, work pressure, isolation, and resilience (Tarab 2022) have therefore changed the perspective of people, their approach toward life and work (Raghavan et al. 2021). Since technology is the disrupting factor in the new normal, hence it is argued that fatigue caused by over exposure to technology possesses negative implication on the well-being.

Subjective well-being is defined as people's evaluations of their lives, while psychological well-being is thought to represent optimal human functioning. Subsequently, we confine our focus on psychological well-being in the present study.

Managing the family and work together is a constant struggle for females, and this challenge was amplified during Covid. One of the most affected parties in this scenario was the working moms. This study is restricted toward academic moms for two reasons; first, the class schedules are fixed and ensuring its regularity is a professional conduct of teaching community; also, the timings of a lecture cannot be compromised. Second, the constant hustle of upgrading teaching pedagogy, engaging students in online classes, continuous feedback and assessments, accompanied by organizing/attending events, are some common responsibilities of teaching faculties, but during Covid lockdown, all of these activities were extremely exhausting

because of the speedy loop in which they were happening; moreover, the frequency of academic meetings has risen due to such an unprecedented scenario to discuss emerging issues. In addition to this, it is uncanny to mention the importance of a mother to her house, children, and family, especially, at the time when the whole world is dwindling between fear, uncertainty, and stress. Subsequently, the real challenge for a working mother was to strike a balance between work and family (amid handling household chores with/without support or help, acting as a caregiver for the family members and taking care of her own health and teleworking all at the same time). Drawing from the tenets of work–family interface model (Frone et al. 1992) that explicitly distinguishes between work interfering with family and family interfering with work, allowed testing of a unique reciprocal relationship between them. Sufficient literature guides an understanding that WFC and FWC are related to negative outcomes both at micro and macro levels (see Giancaspro et al. 2022; Greenhaus et al. 2006), so the post-Covid management is interested in understanding the role of work–family interface to understand its implication on employee well-being and to develop sustainable solutions to adapt to a new normal. All these were several reasons that led to select academic moms in defining the sample universe.

Thus, the aim of this study is to understand the effect of *zoom fatigue* on academic mom’s psychological well-being. Further, two moderators have been tested to understand work–family interface (i.e., work–family conflict and family–work conflict) extent and effect between this relationship.

55.2 Literature Review

The Covid-19 pandemic pressurized teleworking (Belzunegui-Eraso and Erro-Garcés 2020) as a new normal. Undeniably, techno-driven work is the new reality, but excess exposure of it may cause somatic outcomes and exhaustion. Where on the one end this pandemic converted into an opportunity to grow technically, and on the other hand, it raised questions on the psychological, physiological, and relational hustles of its users. In context of education sector, teachers resorted to videoconferencing (virtual platforms like Zoom, Webex, MS Teams, etc.) (Bennett et al. 2021) to deliver lectures and adopted teleworking as a new way to work. The term ‘Zoom fatigue’ gained momentum simultaneously (Fosslien and Duffy 2020; Oducado et al. 2021), and workers are re-counting the increasing personal, professional, and psychological demands of using technology in comparison to the demands of face-to-face (F2F) meetings and contacts (Williams 2021). In a study, Bullock et al. 2021 adopted a techno-stress model as the framework to provide strategies for recognizing and addressing videoconferencing fatigue. ‘Zoom fatigue’ is real and is a critical thought point research studies also suggest nonverbal overload as a potential cause for fatigue and provide arguments to understand psychological consequences (Bailenson 2021), effect on group creative performance (Voogt 2021). Exploratory research shows that race, age, and personality relate to fatigue, and also women perceive greater Zoom fatigue than men (Fauville et al. 2021a, b). There are several perspective, editorial

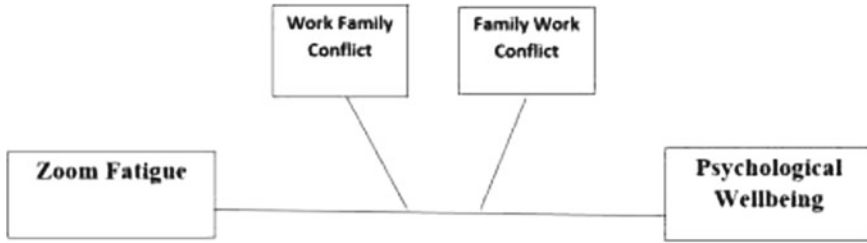


Fig. 55.1 Research model

notes, and articles published recently related to videoconferencing implications, for example, a study addressing ‘videoconferencing fatigue’ focuses on outcomes like mental health, physical distress like eye strain, neck, back and shoulders pain (Sharma et al. 2021); effectiveness of training and learning in surgical sector through webinars (Rathod et al. 2021), challenges of using virtual platforms (Arya et al. 2021) and use them as a medium of online group counseling (Amulya 2020). These articles and research directions indicate a potential scope of this area, but paucity of empirical studies at national and international level demand scholarly attention in this area on account of its applicability in the coming times. Literature addressing teleworking issues and challenges is still in a nascent state, also, ‘Zoom fatigue’ is an emerging topic, and thus more empirical research is needed in this area to understand its implications in India. Also, the work–family conflict is an important issue arose during Covid-19 which has affected the well-being of an individual. Thus, the following research questions are emerged and are drawn for testing:

- RQ1: What is the relationship between Zoom fatigue and psychological well-being?
- RQ2: What is the extent of moderation by work–family conflict and family–work conflict between the relationship of Zoom fatigue and psychological well-being?
- RQ3: What is the impact of (a) general fatigue; (b) social fatigue; (c) emotional fatigue; (d) visual fatigue, and (e) motivational fatigue on psychological well-being (PWB) of working moms in academia?

Based on the above discussion, research questions and literature review, the conceptualized research model is developed to be tested (see Fig. 55.1).

55.2.1 Hypotheses’ Development

Psychological well-being is significant and critical for the development of human beings. The increased role of technology at work defines new challenges, one of which is fatigue or boredom that directly affects the psychological vigor. Recently during lockdown, remote working as a work arrangement was adopted by organizations and its benefits and challenges emerged thereon. To remain relevant and competitive

in the new business and economic environment, organizations need to adapt and transform their processes, structure, and strategies. The education industry resumed work through virtual format. Different videoconferencing tools were adopted (for example, Zoom, Google Meet, Cisco Webex, etc.) by academic institutions to deliver online classes, organized events like convocations, induction programs, conferences, webinars or conducting regular staff meetings and discussions. Because the physical movement was restricted due to lockdown, working women faced the twofold challenge. The biggest challenge for working mothers was the constant hassle between managing the family and work simultaneously. Owing to which their psychological well-being becomes a constant concern. In this study, attention is being drawn on the side effects of over exposure of videoconferencing tools on the well-being of academic moms and the role of family–work interface (i.e., work interfering with family and family interfering with work) moderating this relationship. To attain this objective, the following hypotheses emerge:

Hypothesis 1a: Zoom fatigue is negatively related to psychological well-being of academic moms. Hypothesis 1b: General fatigue; 1c. Visual fatigue; 1d. Social fatigue; 1e. Motivational fatigue; 1f. Emotional fatigue, are negatively related to psychological well-being of academic moms.

Hypothesis 2a: Work–family conflict moderates the negative relationship between Zoom and psychological well-being such that the relationship is stronger with the increasing role of the conflict and vice versa. Hypothesis 2b. Family–work conflict, moderates the negative relationship between Zoom and psychological well-being such that the relationship is stronger with the increasing role of the conflict and vice versa.

55.3 Methodology

55.3.1 *Methods and Procedures*

This study is empirical in nature. A self-reported online survey questionnaire technique was adopted to gather data. Women in academia were contacted to participate in the study. The emails were retrieved from institutional databases and personal contacts. Participants were asked to provide answers that measure videoconferencing effects (due to teleworking in COVID times); psychological well-being and work–family interface. Along with the responses to valid scales, their basic demographic information is also collected to understand the implications better.

55.3.2 Participants

Purposive sampling technique is adopted, and based on that, an online survey was emailed to 400 women working in educational institutes. The eligibility condition of selecting participants is that the women should be working in academic institute in teaching position and must possess one or more children. A final sample of total 258 academic moms participated in this research study. The response rate of the survey was 64.50% that qualified for data analysis. In addition to the required information related to study variables, demographic information including age, work experience, academic level of teaching, nature of employment, number of children, and status of parenting is also asked. The descriptive details are provided in Table 55.1.

Table 55.1 Sample descriptive ($N = 258$)

Particulars		Frequency	Percentage
Age	Below 30	15	5.81
	31–40	145	56.20
	41–50	81	31.40
	Above 50	17	6.59
Work experience	0–5 years	43	16.67
	5–10 years	79	30.62
	10–15 years	84	32.56
	15–20 years	29	11.24
	Above 20 years	23	8.91
Nature of job	Permanent	164	63.57
	Contractual/ad hoc	94	36.43
Academic level teaching	Primary level	67	25.97
	Intermediate level	45	17.44
	UG/PG level	146	56.59
Number of children	One	111	43.02
	Two	104	40.31
	More than two	43	16.67
Single parent	Yes	37	14.34
	No	221	85.66

Source Author

55.3.3 Measures

Zoom Fatigue will be tested through an instrument developed by Fauville et al. (2021a, b) to capture the same. The scale embodies 15 items divided into five dimensions of fatigue: general, social, emotional, visual, and motivational fatigue whose implications on exogenous variable will also be tested. The reliability alpha value of the scale for current study is 0.864, which is statistically considered good.

Work–family interface will be assessed using a ten items valid scale developed used in Netemeyer et al. 1996 that explicitly differentiate between work interfering with family (5 items; $\alpha = 0.853$) and family interfering with work (5 items; $\alpha = 0.880$). This will allow a better understanding of the unique challenges of both ends and allow to deliberate on implications thereon. The combined Cronbach alpha $\alpha = 0.880$ for the current study.

Psychological Well-being (PWB) will be assessed using a comprehensive 8-items valid instrument ‘Psychological Well-Being Scale (PWB)’ edited and validated by Diener and Robert Biswas-Diener (2009).

One of the sample items includes ‘*I am engaged and interested in my daily activities*’. Using the 7-point rating scale, a high score represents a person with many psychological resources and strengths. Internal reliability index shows a very good alpha value of 0.877.

55.3.4 Statistical Tests

Initially, a test of normality suggested by Byrne (2013) is performed for the variables under study. Further, methods of correlation and Cronbach alpha coefficient are used to assess the construct validity and internal consistency for the scales employed in the study (see Table 55.2). Working moms in Indian academia are contacted to gain insights and data collection adhering to the ethical consideration. SPSS and AMOS software will be used to run different statistical test.

55.4 Results

55.4.1 Hypothesis Testing

The first objective of this study is to test the relationship between zoom fatigue and psychological well-being. Results show an insignificant negative relationship between these two variables ($r = -0.035$). This implies that zoom fatigue affects

Table 55.2 Mean, standard deviation, and correlation matrix ($N = 258$)

Constructs	Mean	SD	α	Skewness	Kurtosis	Correlation		
						1	2	3
1. Zoom fatigue	48.058	9.11	0.864	- 0.025	- 0.263	-	-	-
2. Work-family conflict	23.089	4.95	0.853	0.472	0.032	0.453 ^a	-	-
3. Family-work conflict	19.531	5.37	0.88	0.746	0.14	0.153 ^b	0.463 ^a	-
4. Psychological well-being	32.496	7.29	0.877	- 0.081	- 0.334	- 0.035	0.157 ^a	0.008

Correlation is significant at the 0.01 level^a; 0.05 level^b (two-tailed)

psychological well-being negatively; however, the p -value is not significant for the present data.

Moreover, the Zoom fatigue scale is composed of five subdimensions (i.e., general, visual, social, motivational, and emotional fatigue). The data analysis shows that motivational fatigue is the most that affects psychological well-being ($r = - 0.122$) which means that videoconferencing affects the energy levels in individuals to do anything after the exposure to such online tools. In other words, after working for hours due to online classes and meetings, or joining for events, the vigor and enthusiasm get drained which do not allow the individual to take up other activity at least soon after the exposure. So, if the exposure gets extended, the likely chances are that it will affect the well-being of individuals which can lead to further deleterious outcomes for them. In addition to this, the other alarming dimensions are social fatigue ($r = - 0.144$) and general fatigue ($r = - 0.056$) which shows a negative effect on psychological well-being in the present study. This result highlights a very significant managerial concern of building up of anti-social tendencies and anomie in the individuals and this becomes even more significant for future organizations because technology exposure will rise. Future organizational strategies should take care of engaging employees together more to overcome the negative implications of growing techno-interface at work. Further, the emotional fatigue is least affected ($r = 0.004$) and the relationship based on the results between visual fatigue and psychological well-being ($r = 0.67$) indicates a cautious approach of academic moms for high screen time, and on individual basis, the visual health should be given priority, also because despite of any organizational support in this direction, the success of that measure will always be dependent upon individual’s proactive care toward themselves.

55.4.2 Moderation Analysis

In this study, work–family interface is tested in the moderating role between the relationship between zoom fatigue and psychological well-being. To test this, two moderators model PROCESS macro was employed (Hayes 2013) with 5000 bootstraps resamples. The results indicates that work–family conflict does not significantly moderate the negative relationship ($b = 0.0195$; $t = 1.6526$, $p > 0.001$), but family–work conflict does impact the hypothesized relationship significantly ($b = - 0.0333$; $t = - 3.1916$; $p < 0.001$). The R^2 value explained by the model summary is 0.829 with a significant p -value (0.0005). The moderation effect results indicate that work–family conflict moderates the negative effect of Zoom fatigue on psychological well-being of academic moms such that when the work–family conflict is high, the psychological well-being is undermined; however, family–work conflict moderation is insignificant (see Fig. 55.2a, b). In other words, work interference with family life does not affect Zoom fatigue outcomes on psychological health, but as the family interference start to affect the work the psychological well-being is undermined; hence, the H2 is partially supported by the results.

55.5 Implications of the Study

Techno-driven work is the new reality in the changing world. These swift changes in technology have also prompted organizations to realign its people to embrace new forms of business engagement and interaction. In this context, education system is unfolding new parameters of learning and collaborations. Understanding the implications of high screen time on individuals and its role and impact on their personal and professional life will help in formulating flexible and sensitive policies for managing, monitoring, and rewarding work performances. For example, future studies may look into the emotions like anger, frustration, and/or guilt as an outcome of *Zoom fatigue* leading to low psychological well-being, as this will contribute to understand the implications of tech-interface on human emotions and identify the mechanism of the same. Organizations are also interested in identifying how they can reduce the negative implications of technology usage on human diseconomies, for example, the computer-mediated communication (CMC) exhaustion is an emerging research area, and more insights and empirical evidences may suggest the predictors that elevates such exhaustion and thus help in developing coping strategies. Moreover, work–family conflict is a real issue that applies to nearly every individual, and more flexible formats of hybrid mode at work may help in managing it to some extent. However, the effect and extent call further empirical evidences. Also, this study was confined to the sample of women in academia, and the incumbent studies related to teleworking consequences may adopt collect a heterogeneous sample for external

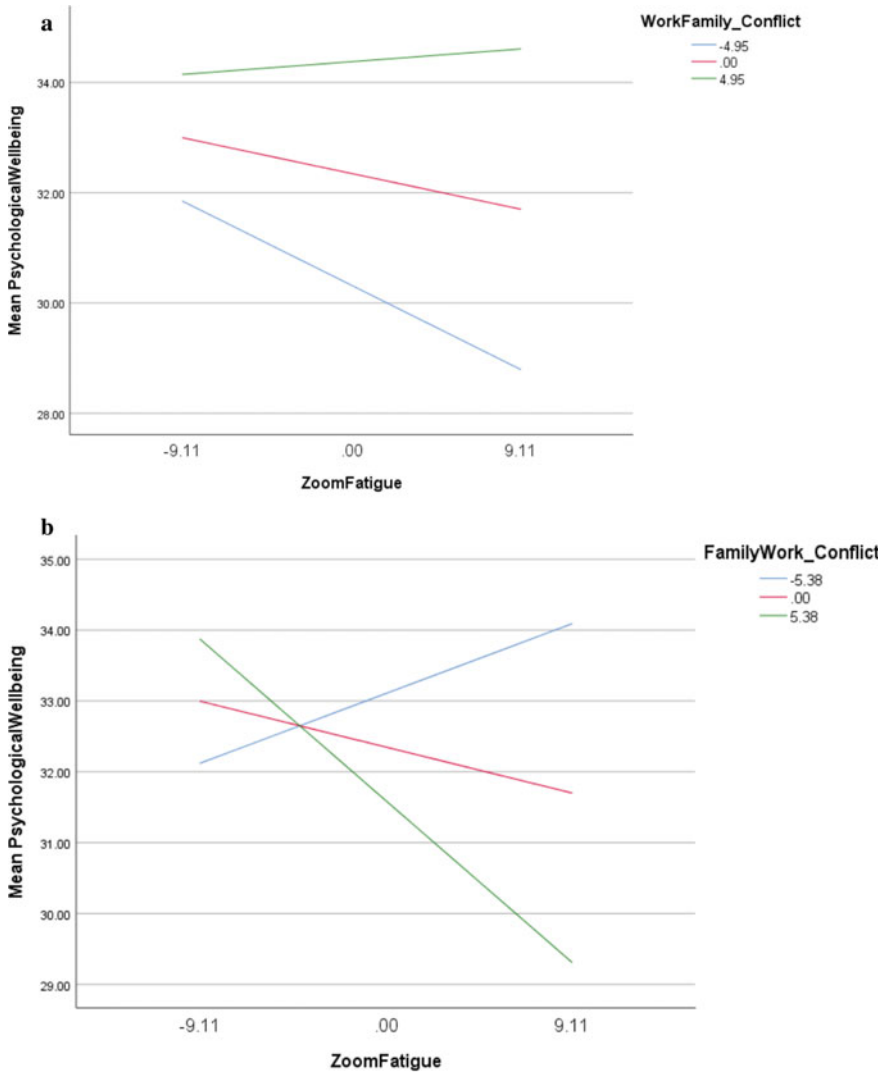


Fig. 55.2 Moderation analysis

validity, although this study is expected to contribute in good measure to the insufficient literature available on research targeting teleworking amid new ways of work (NWoW) policy-related decision-making.

55.6 Conclusion

The main objective of this paper is to understand the impact of increased usage of videoconferencing on the psychological well-being. Also, the role of work–family interface is tested in a moderating role between these relationships. Cross-sectional data from a sample of academic moms in India provides evidence regarding the negative impact of ‘zoom fatigue’ on psychological well-being. Moderation analysis shows a partial moderation of work–family conflict affecting the relationship such that the higher the family interference with work conflicts, the more it negatively impairs the psychological well-being of working moms. However, the work interfering with family effect is insignificant.

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Chapter 56

The Double-Edged Sword of Mindfulness: A Conceptual Model on Managing Work Interruptions While Working from Home



Shilpa Chingam Thottathil and Kapil Verma

56.1 Introduction

Work interruptions have increased significantly with the advent of technology and technological devices in the workspace (Chen and Karahanna 2018; Tams et al. 2020, 2021; Zhou and Rau 2022). The proliferation of information and communication technology (ICT) caused knowledge workers' working days to become more fragmented and also resulted in greater interruptions (Wajcman and Rose 2011). The COVID-19 pandemic-induced changes exacerbated this trend due to greater acceptance of remote work.

The post-COVID workplace can be compared to an ecosystem or a network of sites where work is done both physically and virtually, including offices, homes, public areas, and the surrounding urban area (Surma et al. 2021). Pandemic-related challenges cause stress in employees as they create work-family imbalance and family life disturbance (Kundu et al. 2022). Following the pandemic, there has been a decrease in work-life balance, which reduced employee well-being (Calderwood et al. 2022; Sandoval-Reyes et al. 2021; Wright et al. 2022). Today, the impact of work stressors like interruptions on family life is more pronounced due to the blurred work and home boundaries (Chen and Karahanna 2018; Tams et al. 2021). Therefore, it is critical to comprehend the effects of increased job interruptions on juggling work and family obligations.

According to Leroy et al. (2020), interruptions are kinds of task switching or transitions that occur when the initial task is incomplete. Interruptions can be classified as

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intrusions, breaks, distractions, surprises, and multitasking (Jett and George 2003; Leroy et al. 2020). Based on Leroy et al. (2020)'s conceptualization, Leroy et al. (2021) defined an intrusion as a type of interruption that interferes with one's job and forces one to switch focus when she/he would prefer to continue doing what she/he was doing before the intrusion. A break is described as a planned interruption in one's workday that allows restorative activities. Distraction is a type of interruption that does not truly require one to switch their focus, yet they may nevertheless do so, like a non-urgent mobile phone notification. When someone multitasks, one tries to do many tasks or may attend to many demands at the same time. Surprise arises when something unanticipatedly changes the rate of progress of current work. The interruption profile helped to integrate the disconnected and fragmented literature on interruptions.

Leroy et al. (2020) further suggested that it is important to explore the differences in outcomes across these interruption types. The study by Leroy et al. (2021) investigated the differential effects of these different types of interruptions. They found evidence for the differential impact of breaks, distractions, and intrusions on work-family interference. Intrusions and distractions were positively associated with work interference with family, whereas the effect of breaks was not significant.

Leroy et al. (2020) highlight the need to explore more about the moderators of interruptions and outcomes, like considering the effect of differences in mindfulness practice on people's attention regulation and reaction to interruptions. Furthermore, they emphasized the value of viewing interruptions from a person's perspective and called for additional research on the effects of interruptions on daily life. We address some of these research gaps through our conceptual model, in which we examine three major interruption types—breaks, distractions, and intrusions, and their implications on WFB. We also investigate how mindfulness can influence the impact of different interruption types on WFB. Our study becomes critical in the post-pandemic work environment because both intrusions and distractions increased significantly due to the pandemic-induced changes at the workplace (Leroy et al. 2021).

WFB can be assessed from its constituent parts: WFE and WFC (Frone 2003; Grzywacz and Carlson 2007; Vieira et al. 2018). WFC is defined as "a form of inter-role conflict in which the role pressures from the work and family domains are mutually incompatible in some respect" (Greenhaus and Beutell 1985). WFE is defined as "the extent to which experiences in one role improve the quality of life in the other role" (Powell and Greenhaus 2006).

As per the resource allocation theory of self-control and the JD-R model, frequent intrusions and distractions can drain one's self-regulatory resources and have a negative impact on their well-being.

"Different forms of self-control demands are resisting distractions, impulse control, and overcoming inner resistances" (Schmidt and Neubach 2007). Thus, frequent distractions and intrusions are work demands which cause self-control failure. An experiential sampling study by Puranik et al. (2021) finds that intrusions can decrease self-regulatory resources resulting in lower job satisfaction. Building on this work, we theorize that frequent intrusions and distractions reduce self-regulatory resources and negatively impact WFB by increasing WFC and reducing WFE.

We also try to understand how the mindfulness trait affects the impact of intrusions on WFB. We posit that, contrary to expectation, mindfulness can strengthen the negative impact of intrusions on the WFB, causing greater WFC and lesser WFE. Mindfulness is mostly viewed as a beneficial concept in literature, and very few studies (e.g., Hafenbrack and Vohs 2018; Lyddy et al. 2021) investigate the costs of mindfulness. Additionally, previous studies did not evaluate the moderating role of mindfulness on the everyday impact of intrusions. Mindfulness could be beneficial in the case of distractions and breaks. Mindfulness acts as a self-regulatory resource, and mindful individuals have a greater ability to maintain their attention on the ongoing task, due to which the impact of distractions gets significantly reduced. Thus, following distractions, mindful individuals would experience lesser depletion and, thereby, will have lower WFC and higher WFE.

The effects of long respites outside the work hours are studied highly in literature (e.g., Fritz et al. 2010; Fritz and Sonnentag 2006; Marzuq and Drach-Zahavy 2012). However, there are not many studies on breaks during working hours, with a few exceptions (Chong et al. 2020; Kühnel et al. 2017; Sanz-Vergel et al. 2010). During breaks at work, individuals high in mindfulness can experience greater psychological detachment from work resulting in improved well-being (Chong et al. 2020).

Self-initiated short breaks during work would help to restore self-regulatory resources and enable employees to feel high engagement, according to the daily diary study by Kühnel et al. (2017). Sanz-Vergel et al. (2010) demonstrated that recuperation following breaks improved work-family facilitation and energy, which had a favorable impact on well-being.

In this study, we propose that breaks can positively influence WFB by increasing WFE and decreasing WFC through the recovery experience of control. An individual's flexibility in choosing which activity to engage in during the break time, as well as when and how to do it, determines the level of control during breaks (Sonnentag and Fritz 2007). Mindfulness is beneficial in case of a break as it strengthens the positive influence of breaks on WFB.

The transformation of the workplace since the pandemic (Surma et al. 2021), the increased use of ICT in the workspace (Chen and Karahanna 2018; Tams et al. 2020, 2021; Zhou and Rau 2022), and the blurring of work and family boundaries (Chen and Karahanna 2018; Tams et al. 2021) make this study on interruptions and its implications for WFB very important and relevant. Theoretically, this study contributes to the interruptions typology (Jett and George 2003; Leroy et al. 2020) and mindfulness (Brown and Ryan 2003).

56.2 Theory and Hypothesis Development

The overarching theory used here is the JD-R model. Bakker and Demerouti (2007) propose that the contextual factors of work that influence well-being at the workplace can be categorized as demands and resources. "Job demands refer to those physical, psychological, social, or organizational aspects of the job that require

sustained physical and/or psychological (cognitive and emotional) effort or skills and are therefore associated with certain physiological and/or psychological costs” (Bakker and Demerouti 2007). Frequent distractions and intrusions can be categorized as work demands as they result in resisting distraction, overcoming inner resistance, and impulse control demands. “Job resources refer to those physical, psychological, social, or organizational aspects of the job that are either/or: functional in achieving work goals, reduce job demands and the associated physiological and psychological costs, or stimulate personal growth, learning, and development” (Bakker and Demerouti 2007). Rest periods are viewed as job resources that act as a barrier against nurses developing a desire to leave their job (Wendsche et al. 2022). This study investigates how demands, such as frequent intrusions and distractions, and resources, such as breaks during work hours, affect WFB.

The ego depletion theory, also known as the resource allocation theory of self-control, describes how interruptions and distractions impact people’s WFB (Baumeister et al. 1998; Baumeister and Vohs 2007; Muraven and Baumeister 2000). According to this theory, a person’s capacity for self-regulation, which entails controlling their thoughts, feelings, impulses, performance, and behaviors in accordance with standards, is limited (Baumeister and Vohs 2016). The exertion of self-control will exhaust one’s resources and reduce their potential for additional regulation. Resisting and managing distractions requires self-control demands of impulse control and overcoming inner resistance, which uniquely contributes to job strain (Schmidt and Diestel 2015; Schmidt and Neubach 2007).

Distractions are environmental stimuli like email alerts, loud noises, or one’s own emotions or cognitions that cause the person to divert attention from the ongoing task (Jett and George 2003; Leroy et al. 2020). Frequent distractions can make attention control difficult (Unsworth et al. 2012), as restraining distractions can lead to self-regulatory resource depletion (Schmidt and Neubach 2007). When intrusions occur, people are compelled to divert their attention from the main work, which is contrary to their desires. Hence, they would need to overcome inner resistance and exert impulse control necessitating self-control demands each time they face intrusions.

Frequent demands of self-control at work cause self-control depletion, which can be further transferred to the non-work domain resulting in self-control failure in the non-work domain and thus causing work-to-non-work conflict (Clinton et al. 2020). Hence, frequent work distractions and intrusions will deplete one’s self-regulation capacity resources, which may negatively impact family life resulting in a lower WFB.

The recovery experiences are categorized into four types at work: relaxation, psychological detachment from work, control, and mastery (Sonnentag and Fritz 2007). They also suggested that recovery experiences at work happen in two complementary processes. “First, it is important to refrain from work demands and to avoid activities that call upon the same functional systems or internal resources as those required at work. Second, gaining new internal resources, such as energy, self-efficacy, or positive mood, will additionally help to restore threatened resources” (Sonntag and Fritz 2007). The impact of psychological detachment during breaks during work on well-being (Chong et al. 2020; Liana and Crizelle 2020; von Dreden

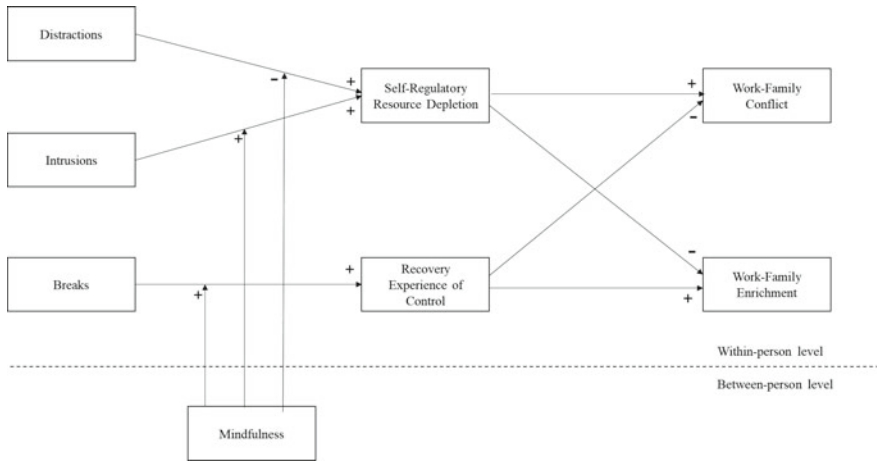


Fig. 56.1 Conceptual model

and Binnewies 2017) is already examined in the literature. However, only very few studies, like Virtanen et al. (2021), examine the impact of other dimensions of recovery experience: control, mastery, and relaxation during work breaks on well-being.

The impact of breaks on the WFB of individuals is explained by the theory of recovery experiences (Sonnetag and Fritz 2007). The level of control experienced during the break will help individuals gain more resources which will help to manage WFB. The conceptual model of this study is given in Fig. 56.1.

56.2.1 Distractions, Intrusions, and Self-Regulatory Resource Depletion

Resisting distractions is one form of self-control demand (Schmidt and Diestel 2015; Schmidt and Neubach 2007) that affects a person’s cognitive processes by diverting attention from the primary task (Jett and George 2003). Clinton et al. (2022) found that resisting distraction and exerting impulse control at work cause self-regulatory resource depletion resulting in failure to regulate attention and suppress impulses. Distractions such as loud noises, email alerts, mobile notifications, or mind-wandering can divert attention away from primary tasks and impact the individual’s cognitive processes (Jett and George 2003). With frequent distractions, greater self-control demands, such as resisting distractions, would be required, resulting in greater self-regulatory resource depletion.

Proposition 1. Distractions during the day are positively associated with the daily depletion of self-regulatory resources.

Frequent intrusions can be a work stressor that demands higher self-regulatory resources. That is because self-control is required to detach from one task and switch to another (Baumeister et al. 2007; Clinton et al. 2020). Individuals would face self-control demands like overcoming inner resistance to the switch and impulse control to overcome their inner urge to continue with the primary task as they are not open to switching attention. There is controlled self-regulation, which is induced by the interrupting task, that forces them to switch attention. Self-regulation that is imposed or controlled is more draining than self-regulation that is voluntarily chosen (Muraven et al. 2008). Puranik et al. (2021) find evidence for the positive impact of intrusions on daily self-regulatory resource depletion.

Proposition 2. Intrusions during the day are positively associated with the daily depletion of self-regulatory resources.

56.2.2 Breaks and Recovery Experience of Control

Breaks can contribute to gaining a sense of control since they are the intentional pause for recovery. Sonnentag and Fritz (2007) state that control experience during the breaks can help gain resources like self-efficacy and competence, which help recover from work. Breaks can lead to a recovery experience helping restore depleted resources from the work demands (Chong et al. 2020; Kühnel et al. 2017; Marzuq and Drach-Zahavy 2012).

Proposition 3. Breaks taken during the day are positively associated with the daily recovery experience of control.

56.2.3 Influence of Distractions, Intrusions, and Breaks on WFB

Frequent distractions would result in self-regulatory resource depletion. Since distractions are external or internal stimuli that divert attention (Leroy and Glomb 2018), resources would be spent on resisting distractions, which is a form of self-control demand. The strong demand for self-control at work can deplete self-regulatory resources and spill over into domains outside of work (Clinton et al. 2020, 2022). Clinton et al. (2020) find that the self-control demands at work can drain self-regulatory resources, further causing work–non-work conflict. By extending the time spent in the work role and limiting the time available for the family role, depleted self-regulatory resources can lead to time-based WFC. After facing frequent distractions, the individual will have lower self-regulatory resources and energy toward the end of the day. This reduces the capability to fulfill family role responsibilities creating stress in the family life and resulting in strain-based and behavior-based WFCs. The lower self-regulatory resources can also reduce WFE. Thus, frequent

distractions can make the functioning of the family domain difficult, contributing to higher WFC and WFE.

Proposition 4a: Distractions during the day cause daily self-regulatory resources depletion and thus increasing WFC and decreasing WFE in the evening.

In intrusions, there is an interrupting task that needs urgent attention (Leroy and Glomb 2018). In order to switch to the interrupting task, individuals need to face self-control demands like overcoming inner resistance to the switch and impulse control to overcome their inner urge to continue with the primary task. Similar to distractions, the depletion of the self-regulatory resource in frequent intrusions will cause time, strain, and behavioral WFC. The depleted self-regulatory resources would also reduce WFE. Leroy et al. (2021) find evidence for the positive impact of intrusions on WFB.

Proposition 4b: Intrusions during the day cause daily self-regulatory resources depletion and thus increase WFC and decrease WFE in the evening.

Breaks during work hours have a differential impact on employees' WFB compared to distractions and intrusions. In breaks, the desire is to switch away from the primary tasks as opposed to distractions and intrusions, where priority is the primary task (Leroy et al. 2020). Thus, we can say that intrusions or distractions are mostly generated by others, whereas breaks are generally anticipated or generated by the self. Interruptions generated by self are negatively related to WFC, whereas interruptions generated by others are positively related to WFC (Khalid et al. 2021).

According to Sanz-Vergel et al. (2010), daily job pressure and the experience of recovery from breaks at work have an effect on WFC and work-family facilitation. The sense of control experienced during the breaks will help resolve the interference of work responsibilities with family life, thus decreasing WFCs. Recovery experience of control helps in gaining internal resources like self-efficacy and accomplishment, which will help in the functioning of the family domain (Fritz and Sonnentag 2006). These resources can be transferred to the family domain, helping in the functioning of family roles. Thus, the sense of control experienced during breaks can increase WFE.

Proposition 4c: Breaks taken during the day help in recovery experience of control and thus decrease WFC and increase WFE in the evening.

56.2.4 Moderating Role of Mindfulness

“Mindfulness can be considered an enhanced attention to and awareness of current experience or present reality” (Brown and Ryan 2003). They also suggest how there would be intra-individual differences in the attribute of mindfulness, both within and between-person variations in mindfulness will have implications for employee well-being. The personality trait of mindfulness differentially impacts the effect of distractions, intrusions, and breaks on the WFB. Leroy et al. (2020) differentiate

intrusions, distractions, and breaks in the perspective of a person's intention for an attention switch. According to them, during a break, the person is more willing to divert their focus away from their primary work. In contrast, in intrusions and distractions, she/he is not keen to switch from primary tasks. An express request or demand to switch attention is present in intrusions and cannot be disregarded. Peripheral stimuli in distractions can be ignored because they do not require immediate attention, although blocking them may be challenging.

Self-control resources are needed to resist the distractions for switching attention and thus continue doing the primary activity, which is the priority. Mindful individuals will be more attentive to the current events or present moment (Brown and Ryan 2003). Thus, in the case of distractions, mindfulness is beneficial because it helps in resisting distractions and, thus, minimizes self-regulatory resource depletion, eventually weakening the negative impact of WFB. Hence, mindfulness buffers the impact of frequent distractions on WFB, weakening the increase of WFC and decrease of WFE.

Proposition 5a: The positive association between distractions and self-regulatory resource depletion is weaker when mindfulness is higher (versus lower).

Proposition 5b: Mindfulness moderates the indirect relationship of distractions with evening WFC and WFE via self-regulatory resource depletion, such that the indirect relationships are weaker when mindfulness is higher (versus lower).

However, in the case of intrusions, mindfulness acts as a cost. Here, self-control resources are needed for switching to the intruding task, that is, resisting the inner resistance and impulse to continue the primary task the person is doing. Here the interrupting task becomes the priority. Frequent intrusions will lead to a greater depletion of self-regulatory resources for a person with higher mindfulness as he is much more aware of the intrusion, and also, more resources of attention are spent on the interrupting tasks. In contrast, a person with low mindfulness can finish interrupting tasks without giving much attention. Hafenbrack and Vohs (2018) find that mindfulness reduces task motivation due to a lack of future focus. Due to the lack of future focus, a mindful person can easily lose track of time and will take more time to complete the primary task, causing time WFC. The decrease of self-regulatory resources and hindrance to the completion of the primary task will also cause strain and behavioral WFC. The dysfunction in the work domain will also result in reduced WFE. Mindfulness acts as a stressor that strengthens the negative impact of frequent intrusions on WFB by strengthening the increase of WFC and decrease of WFE.

Proposition 5c: The positive association between intrusions and self-regulatory resource depletion is stronger when mindfulness is higher (versus lower).

Proposition 5d: Mindfulness moderates the indirect relationship of intrusions with evening WFC and WFE via self-regulatory resource depletion, such that the indirect relationship is stronger when mindfulness is higher (versus lower).

In case of breaks, mindfulness is helpful. Mindfulness will help in achieving a greater recovery experience and thus improving well-being (Chong et al. 2020). Dispositional mindfulness has higher dispositional self-control (Lakey et al. 2007),

because of which they experience greater control during leisure time, helping them gain more resources and greater recovery (Marzuq and Drach-Zahavy 2012). Thus, mindfulness strengthens the positive impact of the break on WFB by strengthening the increase of WFE and decrease of WFC.

Proposition 5e: The positive association between breaks and recovery experience of control is stronger when mindfulness is higher (versus lower).

Proposition 5f: Mindfulness moderates the indirect relationship of intrusions with evening WFC and WFE via recovery experience of control, such that the indirect relationship is stronger when mindfulness is higher (versus lower).

56.3 Discussion

It is increasingly becoming important to capture the quality of attention that individuals allocate to their tasks under varying conditions (Knippenberg et al. 2015). Due to ubiquitous communication technologies, knowledge workers face simultaneous, multiple, and constant calls for attention (Wajcman and Rose 2011). Interruptions make it difficult to direct attention toward a goal and block out distractions, thus making attention regulation challenging (Leroy and Glomb 2018). According to Chen and Karahanna (2018), disruptions typically have negative consequences on outcomes related to both work and non-work. The increase in the use of mobile technology increased work-related interruptions causing work-life conflict and stress (Tams et al. 2020). From a practical perspective, this study gives additional pointers for employees and organizations to deal with the challenges of balancing constant connectivity and a fragmented workday.

This research will significantly advance the typology of interruptions, the literature on mindfulness, and the understanding of recovery. It advances the interruption literature by supporting the proposition of Leroy et al. (2020) and understanding the mechanism for the differential impact of distractions, intrusions, and breaks on individuals' WFB. Though distractions, intrusions, and breaks are types of interruptions, considering the job demand resources theory, they have varying effects as distractions and intrusions become a demand and break a resource. In this study, we propose that distractions and intrusions have a negative impact on the WFB, whereas breaks have a positive effect on the WFB.

Our research advances the understanding of the construct of mindfulness by examining the costs of mindfulness. According to Lyddy et al. (2021), the cost of mindfulness is not examined in research much till now. They found that engaging in surface acting will be worse for mindful employees due to greater self-control depletion causing a negative impact on performance. Through experimental studies, Hafenbrack et al. (2022) found that mindfulness reduces the feeling of guilt and thus decreases the tendency to repair the harm caused to others. In this study, we propose that mindfulness acts as a cost as it worsens the negative impact of frequent intrusions on WFB.

Additionally, we investigate the significance of mindfulness across distinct interruption kinds and its impact on WFB in this study. The study on moderators is quite important for understanding the interruption effects and variability, and only a few studies examine the moderating impact of interruptions (Leroy et al. 2020). The effect of mindfulness on the relationship between breaks and WFB was examined by Sanz-Vergel et al. (2010). However, the effect of mindfulness on the relationship between interruption types and WFB has not been examined previously in the case of intrusions and distractions. We propose that mindfulness has a differential effect on the impact of the different interruption types, like distractions, intrusions, and breaks, on the WFB.

Our research also contributes to the recovery experience (Sonnentag and Fritz 2007) by proposing control experience during breaks as a mechanism for the positive impact of breaks on WFB. According to Sonnentag and Fritz (2007), the process of recovery experience varies in terms of the type of respite experience: psychological detachment and control. Few studies find evidence for the positive impact of psychological detachment during breaks on employee well-being. The detrimental effects of workplace conflict on well-being were lessened by psychological detachment from work during breaks (Sonnentag et al. 2013).

According to Sonnentag et al. (2010), the adverse effects of high job expectations on well-being and work engagement were offset by psychological detachment during free time. Psychological detachment during lunch breaks is positively correlated with vigor measured after lunch breaks (von Dreden and Binnewies 2017). In the recovery experience of control, new resources are gained, which increase WFE and reduce WFC. Research is yet to examine the positive impact of recovery experience of control during work breaks on well-being.

56.4 Conclusion

This study advances interruption typology by clarifying how several interruption types—distractions, intrusions, and breaks—affect employees' WFB. Frequent distractions and intrusions are the work demands that deplete self-regulatory resources, negatively contributing to WFB. Depleting self-regulatory resources will make functioning in the family domain difficult, thus increasing WFC and decreasing WFE. On the other hand, breaks are the resources that help in the recovery experience of control and positively contribute to WFB. The resources gained in the recovery process during the breaks will help in the better functioning of family roles, thus increasing WFE and decreasing WFC.

Further, we propose that mindfulness has a dual-edged effect on the impact of intrusion, distractions, and breaks on the WFB. Mindfulness becomes a cost in case of frequent intrusions as it can strengthen the negative effect of intrusions on the WFB. By increasing the exhaustion of self-control resources, mindfulness strengthens the rise in WFC and fall in WFE. On the other hand, mindfulness becomes a benefit in the case of frequent distractions and breaks. In distractions, mindfulness becomes

a resource that buffers the negative impact of distractions on WFB. By reducing the exhaustion of self-regulatory resources, mindfulness reduces the rise in WFC and fall in WFE. Mindfulness acts as a resource in breaks as it strengthens the positive impact of breaks on the WFB. Mindfulness enables the recovery experience of control during breaks causing greater WFE and lesser WFC. By comprehending the differential mechanism of intrusions, distractions, and breaks in WFB, this study contributes to interruption typology, mindfulness literature, and recovery experience of control.

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Chapter 57

Coping with Burnout from a Job Demands–Resources Perspective



Aparna M. Varma and Rahul Sivarajan

57.1 Introduction

It is commonly understood that work provides people with purpose, meaning and structure, thereby playing a very important role in their day-to-day lives. Individuals tend to employ what is otherwise known as work behaviours, when they engage in work contexts.

Work behaviours are the behaviours one uses in employment and are normally more formal than other types of human behaviour. It is possible to think of a large number of contexts where people engage in the two general types of work behaviours—high performance and low performance. High-performance work behaviours are characterized by them being of high reward as well as engagement. Typical examples of high-performance work behaviours include doctors diagnosing the illness of a patient, a journalist creating a highly sensational piece and so many such instances. On the contrary, low-performance work behaviours have substantially high psychological strain, because of the demanding nature of work itself (LePine et al. 2005).

The eventual transition between high-performance and low-performance works happens due to burnout. Burnout syndrome has been termed as extreme psychological stress, that is characterized by emotional exhaustion, negative work attitudes, senses of diminished accomplishments, that may result in adversely affecting the person's mental health, causing conditions like depression and other kinds of psychosomatic disorders, in the long run (Etzion 1984). There are several already studied reasons for burnout suggested by different scholars, like for example, monotonicity of work can

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turn demanding for the employees who in turn would experience job strain which may lead to their eventual burnout. The personal abilities of the employees may also play a major part here, with it being dynamic itself, and may even tend to go out of sync with their daily work, thereby most often creating a misfit (Edwards et al. 1998), resulting in overwhelming experiences of job strain.

The most common of the effects of job burnout is that employees going through it may become uninterested in the work itself and therefore stop making any kind of significant contributions to it. Job burnouts are commonly said to happen when the employees transcend both their personal as well as job resources in order to meet their job strain (Bakker et al. 2014). The employees who constantly deal with burnout in their careers, ever so because it is indeed a dynamic phenomenon, we may see that they tend to, over the course of time, feel weary and overly exploited by their jobs, which perhaps, they were deeply passionate about once upon a time. All of the studies published on burnout excluding just a handful have dealt with this. Almost all of these have been descriptive in nature, rather than being explanatory. A recent study by Bakker and De Vries (2021) contributed here by looking at the phenomenon of self-regulation exhibited by the employees going through phases of job burnouts, taking cues from job demands–resources theory (JD-R). Here, they suggest that an astute kind of job strain that the employees may experience only constantly aggravates their job burnouts, resulting in an amassing of work fatigue. To address the same, they propose top-down interventions and that structural organizational resources (like HR policies, effective leadership and so on) and the key personal resources owned by the employees (like their personality traits, emotional intelligence and how much proactivity they could employ to work) could be effective as well.

The current study is aimed to be an extension of their model, especially focusing on coping strategies rather than the self-regulation strategies that were used by the employees to navigate their job demands. While going through the extreme perceived demands of their surrounding environment (job characteristics), when their evaluation of the resources at their disposal is lower, employees tend to engage in evaluating the stressor, to ascertain the level of strain endured by the person. This is especially important because, before understanding how it would be possible to cope with a particular stressful situation at hand, distressed employees need to perceptively evaluate situation as potentially stressful. In their subsequent study, Lazarus and Folkman (1987) found that the two of the most pertinent and viable coping strategies that individuals use in strenuous situations included both amending the person–environment scenario and controlling the affective anguish. The model proposed in this study aims to look at both coping strategies and the mechanisms involved in them, in relation with the other factors (like personality of the employee and resilience) that may moderate this relationship between these coping strategies and effectively manipulate the job strain.

57.2 Literature Review

57.2.1 *Job Burnout*

Job burnouts are typically characterized by extreme exhaustion, diminished levels of professional efficacy and increased presence of cynicism (Maslach and Leiter 2008). Debilitating of all a person's energetic resources, resulting in accordant tiredness, and fatigue is exhaustion. Diminished levels of professional efficacy are nothing but increased feelings of incompetency and lack of any successful achievements, especially at work (Maslach and Leiter 2008). Similarly, cynicism generally revolves around negative work attitudes with the peers as well as towards the work itself resulting in them detaching themselves from the work (Maslach and Leiter 2008). These dimensions of burnout are widely studied, amidst the rest.

Higher varying degrees of job demand are seen as an antecedent to job burnouts, that it may require high levels of physical, cognitive or emotional efforts. In specific, factors like work pressure and load, role conflict, stress arising out of it, as well as role ambiguity and several stressful events are all typical antecedents of job burnout (Lee and Ashforth 1996). Having to deal with these high job demands from a prolonged period especially leads the employees to exhaustion and detachment from work. Taking the JD-R perspective, it may be relevant to say that work goals can be achieved used job resources.

Individuals use personal resources such as self-beliefs, especially with respect to how much control a person would have with respect to their work environment, and include factors like self-efficacy, resilience and optimistic attitudes, which may help the employees gain their work-related goals and tackle demands at work. Several meta-analyses have investigated this phenomenon as having predictive validity for work engagement as well as financial returns. In short, it is important for the employees to have an efficacious belief system, together with personal resources which may help them relatively lesser amount of both job stress and resultant job burnout.

Psychological health issues form a predominant consequence of burnout. This happens especially when the employees are both immedicably exhausted, and therefore, cynical about their work. Kim et al. (2011) studied social workers, over a period of three consecutive years, with them being surveyed annually, and found that those who have a significantly higher initial level of burnout tend to report, over a period, more physical health complaints, like for example headaches, sleep disturbances and so on. Several studies in organization literature have studied the positive relationship of burnout, with particular significance to exhaustion, with employee absenteeism (Toppinen-Tanner et al. 2005), turnover (Goodman and Boss 2002), negative relationship with employee engagement (Cole et al. 2012; Freeney and Tierman 2006) and job performance (Taris 2006).

57.2.2 *Coping*

As mentioned earlier, coping comes out of the appraisal that the employees make about their job demands, which sometimes tend to exceed their personal resources and tend to be largely motivated by their own affective reciprocation to both distress and vulnerability (Lazarus and Folkman 1987). It is widely accepted that this appraisal has two primary functions that it serves, one is to alter the person–environment dynamics, thereby influencing positively their job characteristics and demands, and second is to control the level of emotional distress the employee deals with.

One could therefore infer those coping strategies, in fact, which refer to a collection of strategies in which employees going through psychological stress of burnout phenomenon develop themselves, actively as problem solvers. Several studies show a strong correlation between the experience of any events or situations at work that may trigger stress in the employees and the presence of emotional and behavioural problems in them (Rafnsson et al. 2006). In contrast to this, it has been widely suggested that psychological well-being as well as health tends to be largely influenced by the way of coping with stress, rather than the mere presence of difficult situations (Folkman et al. 1987).

Appraisals are a significant part of dealing with psychological stress, resulting in burnouts. Appraisals generally involve two cognitive mechanisms, broadly classified as primary and secondary appraisals. The question of what is at stake is assessed by the primary appraisal. Threat situation comes when the employees address the question of them being in trouble or potentially benefiting from a scenario, either at that point of time, or even in the future.

Similarly, secondary appraisals involve evaluating the resources that are available to cope with a situation. These resources can be physical, such as good health or energy, social, such as support from friends and family, psychological, such as self-esteem or morale, or material, such as financial resources.

Owing to these, coping involves the actions taken by individuals to manage and adjust to demands that are perceived as challenging or overwhelming their resources. These efforts may involve changing one's thoughts and behaviours in order to better handle the situation. (Lazarus and Folkman 1984; Schoenmakers et al. 2015). One may see that it is quite foundational to this definition of coping that it may be seen as process-oriented, meaning that it is very much contextual in nature and the efforts may be dynamic over time. Problem- and emotion-focused copings are the widely studied coping mechanisms in literature (Dysvik et al. 2005). The former involves actively trying to manage and alter the causes of stress to improve the person–environment relationship and prevent burnout. This may involve changing one's behaviours. The “latter” category includes self-regulation efforts that aim to reduce the emotional impact of stressors.

This study builds upon Bakker and De Vries' (2021) JD-R theory and self-regulation model by examining how personal resources contribute to coping with burnout. It is suggested that personal resources are important in helping employees who are experiencing distress to cope with the situation. It is not necessary for these

strategies to be used when demands are low (Parkes 1990). Therefore, it can be argued that coping strategies are personal resource that individuals can use to manage stress. Researchers have put forth that this aspect makes coping strategies a useful resource for employees to use when they are under stress (Searle and Lee 2015).

Many studies have successfully applied JD-R model to study stress and well-being (Bakker and Demerouti 2014). According to the model, job demands contribute to burnout in employees, but the resources that employees have can help them cope with burnout and increase their job engagement (Bakker and Demerouti 2014; Llorens et al. 2006).

Employee self-efficacy, esteem and locus of control and associated constructs like optimism have been studied in literature in the JD-R context (Bakker and Demerouti 2014; Xanthopoulos et al. 2007). Some coping strategies have also been consistently linked to psychological resilience, which is consistent with the understanding of personal resources (Hobfoll et al. 2003). According to Rutter (2006), these coping strategies are consistently predictive of resilience. The use of certain coping strategies has been identified as a mechanism through which personality traits and personal resources can influence well-being as well (Bolger and Zuckerman 1995).

57.3 The Proposed Model

This study builds upon the idea proposed by Bakker and De Vries (2021) that employees can influence their own job characteristics. Previous studies on coping strategies have focused on understanding them as a reaction to current stressors, rather than as a means of managing future stressors (Aspinwall and Taylor 1997). In contrast to regular coping strategies, which are typically used in a reactive manner, proactive coping refers to the act of anticipating and preparing for future stressors by setting targets and devising schemes to achieve the best possible outcomes. Proactive coping also provides a conceptualization of coping where the individual's personality plays a key role. Studies have looked at the relationship that proactive coping has with individuals' personality traits, especially with reference to the five-factor model (Hambrick and McCord 2010). This involves taking proactive steps to address potential stressors before they arise, rather than waiting until they occur to try to cope with them. Proactive coping has been studied as an important predictor of engagement (Uskul and Greenglass 2005). In another study that had taken firefighters as sample using the JD-R framework, Angelo and Chambel (2014) found a positive relationship between proactive coping and work engagement. The results of the study depicted similar patterns to that of several other studies and extended the JD-R model by highlighting the role of demands and resources in explaining employee well-being as well. This paper builds on the argument that the ways in which individuals choose to deal with stress can be understood as a personal resource. Taking cues from this argument, proactive coping can be considered as a personal resource employed by the individuals in dealing with stressful situations that they encounter. Studies that

have taken this perspective have found that proactive coping played a moderating role between job demands, engagement and burnout (Searle and Lee 2015).

Similarly, perseverance is another personal resource that has been recognized as an important factor in the model. It is characterized as the ability to persist in working towards the successful completion of a task, even in the face of challenges or setbacks (Crant 2000). In this model, it is proposed that perseverance behaviours and proactive behaviours can be strong personal resources that help employees cope with the effects of job burnout.

Proposition 1a: Proactive behaviour as a personal resource may have a positive effect on the problem-focused coping strategies and a negative effect on emotion-focused coping strategies.

Proposition 1b: Perseverance as a personal resource may have a positive effect on the problem-focused coping strategies and a negative effect on emotion-focused coping strategies.

The model suggests that employees can influence their job characteristics using two coping strategies: problem-focused and emotion-focused coping. From the perspective of the JD-R theory, which posits that engaged employees who are highly dedicated to their work and have high levels of energy may proactively cope with job demands through various mechanisms, this study suggests that problem-focused coping includes proactive vitality management and the use of individual strengths. In contrast, self-regulatory, emotion-focused coping may backfire, particularly when it takes the form of self-defeating behaviours. Additionally, the model proposes that two factors, the perfectionist personality trait of the employee and resilience, can act as moderators in the positive linear relationship between job demands and job strain, leading to job burnout. The relationships proposed are shown in Fig. 57.1.

Several studies have already established the positive linear relationship between job demands and job strain (Lazarus and Folkman 1987). Two variables, namely resilience and personality factors like self-oriented perfectionism of the employee, may moderate this relationship. The below section discusses this in detail.

57.3.1 Moderating Variables

Resilience: Employee resilience has been widely studied in organizational literature and is defined as “an adaptive behavioural capacity that involves integrating and utilizing organizational resources” (Kuntz et al. 2016). Employee resilience as a construct has been considered to be much similar to the construct of organizational resilience and is demonstrated through the behaviours that employees engage in to cope with job strain and related challenges (Stokes et al. 2019). These challenges can be varied in nature, but often include recurring job demands and routine changes and uncertainties. The interaction of individual and environmental factors

contributes to employee resilience and the behaviours that demonstrate this capability (Näswall et al. 2019). Research suggests that personal resilience is influenced, at least in part, by biological factors, but it is not a fixed trait and can be developed through experiences that promote adaptive capacity. This means that individuals can exhibit resilient behaviours when they are in environments that support proactive, adaptive and supportive behaviours. In other words, when organizations encourage these behaviours, employees may be more likely to behave in a resiliently (Luthans et al. 2013).

Proposition 2a: The positive relationship between job demands and job strain is negatively moderated by employee resilience.

Self-oriented perfectionism: Self-oriented perfectionism consists of a set of internally motivated beliefs that include ones like striving for perfection, leading individuals to set extremely high personal standards and become highly critical of themselves if they fail to meet these expectations. In a study using junior athletes as samples, Hill and Appleton (2012) found that intrinsic motivation levels of the athletes mediated the relationship between self-oriented perfectionism and burnout. In five separate longitudinal studies conducted on college students and musicians, Powers et al. (2011) found a negative relationship between self-criticism and goal progress. This was also much in line with the theoretical predictions that self-defamation along with high levels of raucous internal judgements of the self-critic individuals interfere with their goal pursuit. Previous studies have studied the effects of the same on these individuals that may include diminished problem-solving abilities, increased procrastination levels and increased self-concordant motivation, which are all significant pre-determinants of burnout (Powers et al. 2009). The self-critical behaviour of self-oriented perfectionists may lead them to engage in self-defeating behaviours, which can hinder their progress towards their ideal goals (Thau et al. 2007).

Proposition 2b: Self-oriented perfectionists may tend to engage more in self-defeating behaviours because of their overly self-critical behaviour.

Proposition 2c: Self-oriented perfectionism could have a positive moderating effect on the relationship between job demands and job strain.

57.3.2 Mediating Variables

Proactive vitality management: Proactive vitality management reflects a framework that combines creativity and proactivity in the new construct of proactive vitality management, which refers to the ability of employees to effectively manage their energy levels in order to enhance their creativity at work (Op Den Kamp et al. 2018). This involves taking proactive steps to maintain or boost energy levels in

order to perform at their best and be more creative in their work. It is defined as “the individual, goal-oriented behaviour aimed at managing physical and mental energy to promote optimal functioning at work” (Op Den Kamp et al. 2018). This is particularly important in the context of coping because of the research on employee energy in work contexts. Several studies have highlighted the importance of taking steps to replenish energy reserves after work, in order to preserve overall well-being and productivity. This may include activities that help individuals relax and unwind, such as engaging in leisure activities or hobbies, or simply taking time to rest and relax. These activities can help individuals achieve psychological detachment from work, which is important for maintaining balance and preventing burnout (Sonnentag et al. 2017). Additionally, studies have also shown that physical energy can be renewed (Fritz et al. 2011; Zacher et al. 2014). However, Op Den Kemp et al. (2018) suggests that proactive vitality management goes beyond this, as it involves proactive efforts to manage strain from work, similar to problem-focused coping.

Proposition 3a: Proactive vitality management could have a negative mediating effect on the relationship between job strain and job burnout.

Strengths use: Using strengths is important at both the interpersonal as well as intrapersonal levels (Biswas-Diener 2009). Individuals naturally tend to grow and develop their potential, particularly in environments that support their development and help them flourish (Linley and Harrington 2006). Research has shown that implementing an individual’s strengths can enhance goal attainment, self-esteem, well-being, self-fulfilment and happiness (Linley et al. 2007), leading to higher levels of functioning and ultimately contributing to organizational performance (Liehmann 2009). It is important to note that strengths’ use can be initiated by the employee or the organization. For employees to use their strengths effectively, they need to feel that the organization supports them in reaching their full potential (Botha and Mostert 2014). Using strengths can be a coping strategy for employees and can increase their engagement, reducing the risk of burnout (Sonnentag et al. 2017). As an organizational tool, another experimental study looked at how strengths intervention can play an important role in reducing burnout and increasing engagement levels in employees by increasing positive affect in them (Meyers and van Woerkom 2017).

Proposition 3b: Strength’s use may have a negative mediating effect on the relationship between job strain and job burnout.

Self-defeating behaviour: Although it is not a widely studied coping strategy, self-defeating behaviour as a counterproductive work behaviour, such as self-defeating behaviour, can be considered negative coping strategies (Hitlan and Noel 2009). Spector and Fox (2002) suggest that these behaviours often result from an emotional reciprocation to a stressor and involve actively attacking the cause of the situation or “passively and indirectly coping with the emotion.” A study by Allen and Greenberger (1980) also suggests that employees may engage in destructive or self-defeating acts to increase feelings of control over a stressor.

Proposition 4: Self-defeating behaviour may have a positive mediating effect on the relationship between job strain and job burnout.

57.4 Practical Implications

The model expands upon the work of Bakker and De Vries (2021) by illustrating the ongoing interaction between individual employees and their employer organization in the process of burnout. When employees experience high and sustained job demands, they may reach a point where they are unable to use any more problem-focused coping strategies and must rely solely on emotion-focused coping strategies that may involve counterproductive work behaviours, which can further exacerbate their fatigue. This can lead to a downward spiral of strain and eventually lead to employee attrition. In such situations, adaptive HR practices and supportive leadership may prove to be significant resources that may help the employer organizations in reducing and preventing employee job strain and burnout. Additionally, employees who possess these personal resources may be able to prevent burnout by using them to their strength, proactively managing their vitality and enhancing their creativity. They may also be able to provide support to colleagues who are experiencing burnout, which can be crucial in helping them overcome burnout and remain with the organization. Therefore, both employers and employees have their own parts to play in the prevention and reduction of burnout (Bakker and De Vries 2021).

57.5 Future Direction

As per the nuances of the model, taking proactive steps to manage energy levels and utilizing personal strengths can aid employees to effectively endure and manage high job demands and decrease their risk of burnout. In contrast, relying on coping strategies that involve negative emotions or self-defeating behaviour may increase the risk of burnout. Additionally, the model emphasizes the impact of the relationship between employees and their employer on burnout prevention and reduction. Empirical research is needed to confirm the validity of the model and the propositions.

Appendix

See Fig. 57.1.

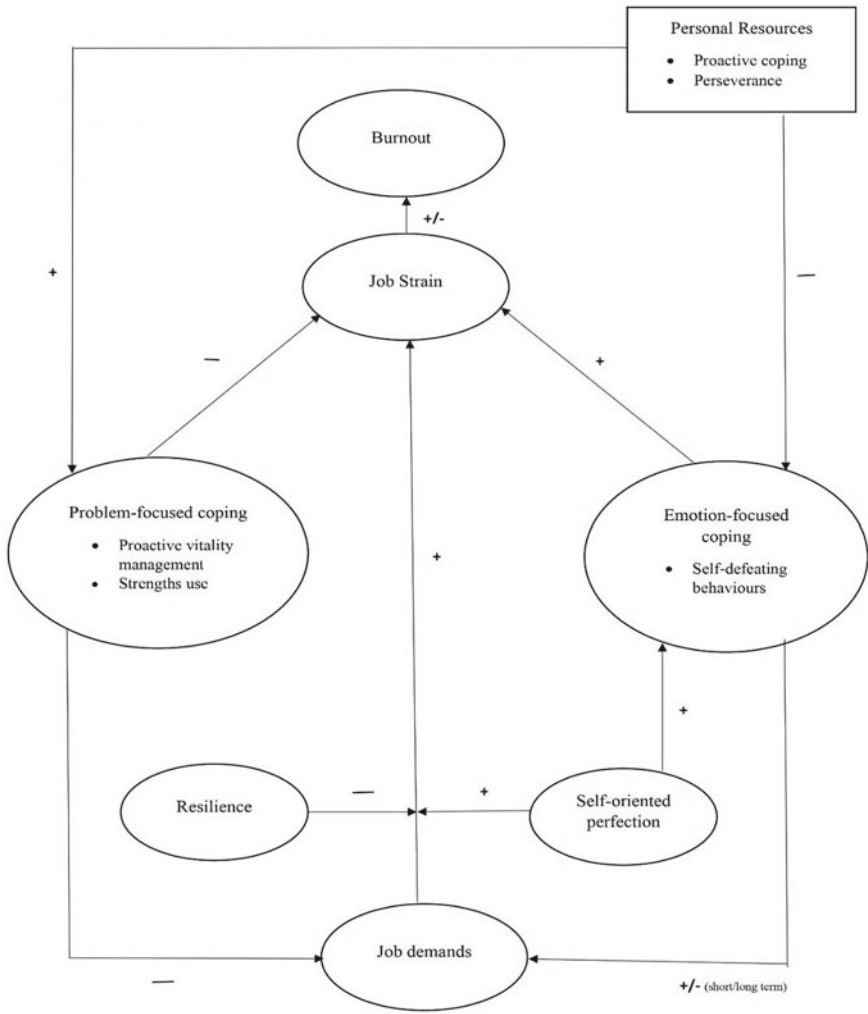


Fig. 57.1 The Conceptual Model

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Chapter 58

The Development of Leader-Member Exchange Construct and the Emergence of Algorithmic Leader-Member Exchange Construct in the Gig Economy



Deepanshu Wadhwa

58.1 Introduction

The objective of this discussion is to give a review of the construct “leader-member exchange.” Although this construct has been in application for decades, several conceptualizations and operationalization inaccuracies have been highly ignored in research on leadership studies. Our first aim is to highlight the current scenario of the construct. We have reviewed the papers published on leader-member exchange in two top journals: the academy of management journals and the leadership quarterly. Focusing on the construct’s definition, construct measurement techniques used, and other psychometric properties; we have given a summary of the construct. We referred to papers from the last ten years (2012–2022) to observe the latest progress in this construct’s specification and measurement elements.

After giving a summary, our second objective is to examine this construct’s progress. We highlighted the good and bad aspects reported in the papers. We argued that there are several issues with the concept’s definition and its measurement practices have some discrepancies. Such points must be checked before using the construct in future research work. And later on, some recommendations are given to rectify the deficiencies.

Then we move forward toward the second part of this paper. With the shift in work practices, many firms are hiring gig workers. Such firms do not work like traditional organizations where leader-member dyadic relationships exist. Instead, in gig economy firms, the workers have no direct supervision by human agents. The position of traditional leaders has been taken by algorithms, which take care of the needs and requirements of workers. In such context, we want to check where the

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construct “leader-member exchange” stands. We have tried to fit the leader-member exchange construct in the gig economy world. In such a process, at one end, we are checking the level of abstraction of this construct. On the other end, applying this construct in a context like the gig economy will open new windows for using the traditional organizational behavior theories in the newly emerged gig economy organizations.

58.2 Theoretical Background

Before getting into the concept specification and measurement practices of leader-member exchange in our target journals and papers, we need to understand the theoretical grounding of the construct and the contexts in which the construct is defined. Schwab (1980) said that if we want to specify the construct’s definition, we need to specify the domain of the construct and the anticipated psychometric properties like reliability, dimensionality, and measurement errors. The construct’s definition within the theoretical framework is the first step of construct development and validation. That is the reason we want to start the discussion from the theoretical grounding of LMX. Moreover, this theoretical framework will guide us in effectively critiquing the construct in the later section of this paper. Thus, we looked into several theoretical associations of the construct by referring to the history of LMX.

In the 1970s, the researchers started challenging the dominant paradigm of “consistent leadership across followers” by introducing the *vertical dyad linkage theory* (Dansereau et al. 1973). The basic premise of this theory lies in *role theory*. The theory suggests that the roles of employees are defined by formal job description processes along with some informal processes. And there is a crucial task for employees’ immediate supervisors to describe the employees’ roles. Specifically, in determining the employee’s role, a series of informal exchanges occur between the employee and supervisor. In such exchanges, the employee provides quality work, a positive attitude, and compliance, and in return, the leader offers support, attention, energy, information, and time (Graen and Cashman 1975). Such exchanges are informal since they are not part of any condition under the employment contract. The point to note here is that there can be *variations* in such testing, negotiation, and exchange processes across followers, depending on the needs, time, abilities, and requirements of the leader and follower. Thus, the leadership style won’t be consistent for all the followers. This notion of mutual exchange between leader and follower defines the construct as a “dyadic construct.”

In the later development of the construct, Dienesch and Liden (1986) suggested two theoretical perspectives for further clarifying the construct: *LMX theory* and *social exchange theory*. Based on the role theory, the roles of followers are defined by leader-follower exchanges. But the purpose of a theory is to describe how and where it is happening. LMX theory served this purpose.

LMX theory describes the exchange process as unstructured, interpersonal, and informal between leader and follower within the premises of the workplace, which helps the followers to identify with the work and define their role within a unit in the workplace. The theory argues that there are time constraints for leaders to develop a good quality relationship with some of the employees. Some employees close to the leaders are part of the in-group, while others act as out-group members. Such description of *LMX theory* by Dienesch and Liden (1986) was an essential step in developing the LMX construct. Highlighting the notion of in-group and out-group, this theory guides some of the antecedents (individual characteristics, behaviors of follower and leader, group composition, culture) and consequences (attitude, OCB, performance) of LMX (Tse et al. 2018).

Dienesch and Liden (1986) also tried to connect the LMX construct with *social exchange theory*, and several other researchers also associated the two. However, these two are somewhat different as social exchange theory works at a higher level of abstraction rather than limiting only to leader-follower relationships as LMX does. And *LMX theory* explains the in-group out-group formation as an outcome of exchanges, while in *social exchange theory*, there is no anticipation of any future returns. The authors connecting these two are making errors.

There is also another shift of focus in theoretical perspectives of LMX from the exchange relationship between leader and follower to the *follower's perception* regarding the quality of *the relationship between follower and leader* (Schriesheim et al. 1999). This shift in focus is also visible in some recent papers (*relational leadership theory*).

Overall, we can say that some concrete theoretical frameworks explain the construct: of leader-member exchange. This background will guide us in reviewing the current papers. Also, this helps us distinguish between LMX theory and LMX construct.

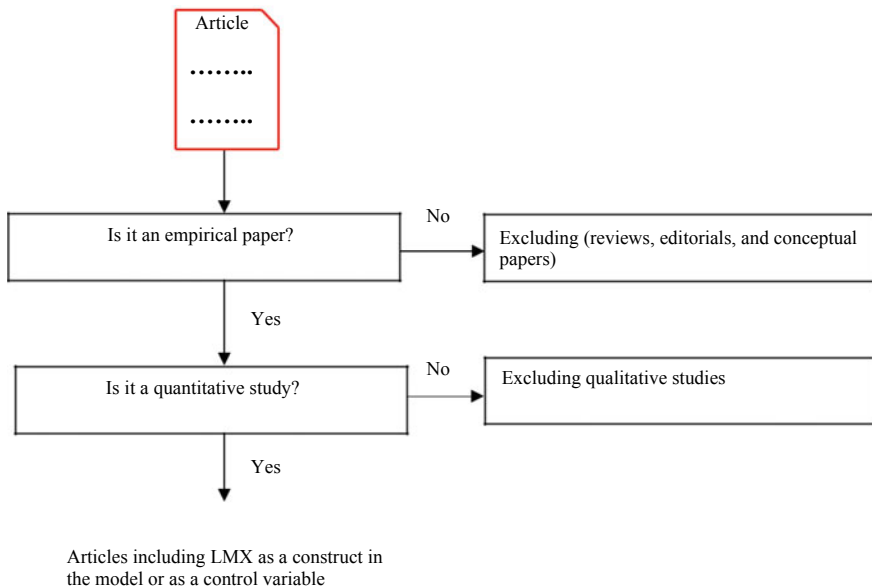
LMX theory is the theory given by Dienesch and Liden (1986) that we discussed earlier. And the LMX construct is a construct that researchers define according to their research context and requirements. For example, in the table, you can see: Hill et al. (2014) define LMX as “a quality of the relationship between leader and follower,” referring to Schriesheim et al. (1999) (relational leadership theory notion), while Zhang et al. (2012) define it as “a dyadic exchange relationship between leader and follower,” referring to Dienesch and Liden (1986). Our focus is LMX construct; thus, we included the papers that used the LMX as a construct, whether they referred to *LMX theory*, *VDL*, *social exchange theory*, or *relational leadership theory*.

Our motivation for studying about “leader-member exchange” construct are following. Firstly, there are more than fifty years of history of this construct which gives sufficient knowledge on the conceptualization and theoretical grounding of the construct. Secondly, researchers have been concerned about conceptual and operational clarity of leader-member exchange for more than thirty years. Yet, little progress has been achieved for improvement and tackling the criticism. And the third motivation is the concern regarding applying traditional organizational theories and constructs in gig economy organizations. Such organizations work differently, and checking whether the organizational behavior constructs can be applied directly to

such contexts is one of our concerns. Fitting the leader-member exchange construct in such leaderless organizations will extend the research on leader-member exchange. Also, it gives a framework to study gig economy organizations from the lens of contemporary organizational behavior research and practices.

To fulfill our first objective of summarizing and critiquing the construct, we have reviewed empirical papers from the two prestigious micro-organizational behavior journals (the academy of management journal and the leadership quarterly) in the last ten years (since 2012). Our objective is to look at the recent progress of the construct and to understand whether the current authors acknowledged the issues of LMX discussed by past critiques in their papers. Thus we looked at recent papers (last ten years). AMJ is one of the most prestigious journals of organizational behavior, and the leadership quarterly is one of the prestigious journals of leadership studies; this combo gives an overall picture of what is the scenario of the construct LMX in both OB and leadership studies. This can be a limitation of our paper. Future authors look at more journals.

We focused on summarizing the construct definition, measurement practices, and things reported in the empirical papers. We started searching for published articles with the title and keywords “LMX” or leader-member exchange. After getting a list of 50 papers from AMJ and 112 papers from the leadership quarterly journal, we used the following inclusion criteria for articles:



After excluding the irrelevant papers, reviews, editorial essays, conceptual papers, and qualitative studies, we were left with eleven papers from AMJ and forty-one papers from the leadership quarterly. In these fifty-two papers, we focused on the

definition of leader-member exchange, the scales they used to measure the construct, and other psychometric properties. The following sections summarize our findings and briefly review the construct. The tables below give us the summary findings of our papers:

Papers published in *The Academy of Management Journal*

Author(s)	Definition of leader-member exchange	Scale used	Coefficient alpha	Acknowledging multidimensionality
Zhang et al. (2012)	LMX refers to the dyadic exchange relationship between a leader and a follower (Graen and Uhl-Bien 1995)	LMX 8	Not reported	No
Matta et al. (2015)	Using role theory, Graen described the development of LMX relationships as a role-making process	LMX 7	0.89: follower rating 0.83: leader rating	No
Peng et al. (2014)	Quality of exchange relationship between leader and follower (Graen and Uhl-Bien 1995)	LMX-MDM	0.86	Yes
Cooper et al. (2018)	According to SET, a leader and a subordinate engage in a series of episodes of resource exchange, and depending on their communication and behavioral responses, they will either develop a high or low-quality LMX	LMX-MDM	0.91	Yes
Yam et al. (2018)	Quality of exchange relationship between leader and follower (Graen and Uhl-Bien 1995)	LMX 8	0.96	No
Dwertmann and Boehm (2016)	Quality of exchange relationship between leader and follower (Graen and Uhl-Bien 1995)	LMX 8	0.95	No

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Author(s)	Definition of leader-member exchange	Scale used	Coefficient alpha	Acknowledging multidimensionality
Zhang et al. (2015a, b, c)	Quality of exchange relationship between leader and follower (Graen and Uhl-Bien 1995)	LMX 7	Not reported	No
Lin et al.	Quality of exchange relationship between leader and follower (Graen and Uhl-Bien 1995)	LMX 7	Not reported	No
Lu et al. (2019)	Quality of exchange relationship between leader and follower (Graen and Uhl-Bien 1995)	LMX 8	0.89	No
Li and Tangirala (2021)	Quality of exchange relationship between leader and follower (Graen and Uhl-Bien 1995)	LMX 7	Not reported	No
Ehrhardt and Ragins (2019)	Quality of exchange relationship between leader and follower (Graen and Uhl-Bien 1995)	LMX-MDM	Not reported	Yes

Papers published in *The Leadership Quarterly*

Author(s)	Definition of leader-member exchange	Scale used	Coefficient alpha	Acknowledging multidimensionality
Volmer et al. (2012)	LMX theory builds on social exchange theory and assumes that a supervisor has a unique relationship with each employee (Graen and Uhl-Bien 1995), which is negotiated over time as a result of role expectations and fulfillments between leaders and members	LMX 7	0.86	No

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Author(s)	Definition of leader-member exchange	Scale used	Coefficient alpha	Acknowledging multidimensionality
Xu et al. (2015)	LMX is “the emotional and resource-based exchanges in the supervisor–subordinates dyad”	LMX 7	0.88	No
Harris et al. (2013)	Leaders develop different quality relationships with followers in their work groups	LMX 8	0.85	No
Naseer et al. (2016)	LMX theory asserts that leaders establish distinct associations with each of their followers through a system of exchanges (Graen and Cashman 1975; Scandura and Graen 1984)	LMX 7	0.79	No
Kuvaas et al. (2012)	According to leader-member exchange (LMX) theory, leaders develop unique exchange relationships of varying quality with individual followers	SLMX and ELMX	Not reported	No
Blanc and González-Romá (2012)	No explicit definition is given in the paper	LMX-MDM	0.84	Yes
Little et al.	With its roots in social exchange theory, leader-member exchange suggests that leader-follower interactions lay the foundation for perceptions of the quality of the exchange relationship between leaders and followers	Both LMX 7 and LMX-MDM	Not reported	No
Tse et al. (2012)	No explicit definition in the paper	LMX 7	0.94	No

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Author(s)	Definition of leader-member exchange	Scale used	Coefficient alpha	Acknowledging multidimensionality
Hill et al. (2014)	Leader-member exchange refers to the quality of the relationship between an employee and their supervisor (Dienesch and Liden 1986; Graen and Uhl-Bien 1995)	LMX 7	0.9	No
Anand et al. (2018a, b)	Leader-member exchange theory maintains that in a workgroup leader-follower relationships run the entire gamut from low to high	LMX-MDM	0.9	Yes
Jackson and Johnson (2012)	The fundamental assumption of LMX theory is that leaders form relationships of differing quality with their subordinates	LMX 7	0.89	No
Richards and Hackett (2012)	Grounded in role theory, social exchange theory, and attribution theory, LMX focuses on the dyadic exchange between a leader and a subordinate, as well as the process through which the relationship develops	LMX-MDM	Not reported	Yes
Chen et al. (2014)	No explicit definition is given in the paper	LMX 7	0.92	No
Sun et al. (2013)	No explicit definition is given in the paper	LMX 7	0.86	No
Liao et al. (2016)	According to LMX theory (Dienesch and Liden 1986; Graen and Uhl-Bien 1995), leaders develop different quality exchange relationships with followers	LMX-MDM	0.92	Yes

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Author(s)	Definition of leader-member exchange	Scale used	Coefficient alpha	Acknowledging multidimensionality
Tsai et al. (2017)	Derived from the vertical dyadic linkage approach, LMX theory depicts the extent to which a leader and a follower exchange resources and support beyond what is expected based on the formal contract	LMX 7	0.85	No
Anand et al. (2018a, b)	LMX scholars maintain that the dyadic partners contribute to relationship establishment and development. The concepts of social exchange and reciprocity are fundamental to LMX	LMX-MDM	0.8	Yes
Marstand et al. (2017)	According to LMX theory, leaders develop exchange relationships of different quality with their followers	LMX 7	Not reported	No
Haynie et al. (2014)	Leader-member exchange (LMX) theory has offered essential insights by describing the differing relationships that subordinates have with their supervisors	LMX 7	0.87	No
Bernerth and Hirschfeld (2016)	LMX is perhaps the most popular conceptualization of the give and takes that occur between leaders and their followers	LMX 8	0.95	No
Epitropaki and Martin (2013)	LMX describes the quality of the social exchange relationship between a supervisor and a subordinate (Graen and Uhl-Bien 1995)	LMX 7	0.91	No
Fisk and Friesen (2012)	Leader-member exchange (LMX) theory describes leadership as a process	LMX 7	0.92	No

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Author(s)	Definition of leader-member exchange	Scale used	Coefficient alpha	Acknowledging multidimensionality
Tse et al. (2013)	We contend that LMX captures the supervisor-based social exchange process	LMX 7	Not reported	No
Zhang et al.	Leader-member exchange (LMX) theory is a dyadic approach to understanding supervisor-subordinate working relationships	LMX 7	0.92	No
Omilion-Hodges and Baker (2013)	Leader-member exchange suggests that superior-subordinate relationships develop through incremental influence of the social exchange process	LMX 7	0.94	No
Collins et al. (2014)	No explicit definition is given in the paper	LMX-MDM	0.94, 0.88, 0.91, 0.84 for all the dimensions	Yes
Douglas (2012)	No explicit definition is given in the paper	LMX 7	0.86	No
Naseer et al. (2016)	Leader-member exchange (LMX) theory asserts that leaders establish distinct associations with each one of their followers through the system of exchanges	LMX 7	0.79	No
Harris et al. (2014)	A fundamental tenet of LMX theory is that leaders develop different quality relationships with followers in their work groups	LMX 8	0.85	No
Fisk and Friesen (2012)	Leader-member exchange (LMX) theory describes leadership as a process, focusing on the relationship between a leader and a follower	LMX 7	0.92	No
Amundsen and Martinsen (2014)	No explicit definition is given in the paper	LMSX	0.94	No
Nichols and Cottrell (2014)	No explicit definition is given in the paper	LMX 7	0.83	No

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Author(s)	Definition of leader-member exchange	Scale used	Coefficient alpha	Acknowledging multidimensionality
Zhang et al.	LMX theory argues that because leaders have limited time, attention, and resources, they usually assign varying roles to subordinates and treat them differently	LMX 7	0.85	No
Liao et al. (2016)	Leaders maintain high-quality exchange relationships with a small number of their subordinates and regard them as “trusted assistants” who help in the (Chinese context) functioning of the work unit	LMX 7	0.95	No
Chun et al. (2018)	No explicit definition is given in the paper	LMX 7	0.86	No
Pelletier (2012)	LMX relationships are developed initially by the leader’s evaluation of the follower. If the leader views the follower as being dependable, competent, and likable, that person enjoys a high exchange relationship with the leader and becomes a member of the “in-group”	LMX-MDM	0.97	No
Vidyarthi et al. (2014)	No explicit definition is given in the paper	LMX 7	0.87	No
Landry et al. (2014)	Leader-member exchange (LMX) captures the quality of the exchange relationship between a supervisor and an employee	LMX 7	0.91	No
Gooty et al. (2019)	Leader-member exchange (LMX; Graen and Uhl-Bien 1995) was the first cast as the quality of the exchange relationship between a leader and follower	LMSX	0.84	No

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Author(s)	Definition of leader-member exchange	Scale used	Coefficient alpha	Acknowledging multidimensionality
Riggs and Porter (2017)	LMX theory draws from role and social exchange theories to explain the process by which leaders and followers develop and maintain relationships of varying quality with each other	LMX 8	0.83	No
Medler-Liraz and Kark (2012)	At the core of the LMX theory is the notion that leaders treat their subordinates differently depending in the quality of the social exchange between them (Graen and Uhl-Bien 1995)	LMX 7	0.85	No

58.3 Findings and Critique

58.3.1 Definition

Graen and Uhl-Bien (1995) did prominent work in specifying the LMX construct. They defined leadership studies under three domains: leader, follower, and the relationship. In the domain of “leadership” and “follower,” the primary focus is on the leader and follower, respectively. That includes their personality and behavioral characteristics in isolation. In the third domain, relationship, the focus is on the features of the dyad and how the dyadic relationships affect the organizational outcomes. These features include trust, mutual obligation, and respect. Graen and Uhl-Bien (1995) located LMX under this relationship-based approach to leadership. In LMX, the focus must be on describing leadership relationships among the leader and followers in the organizations. Relationships act as the basis for the incremental influence which is required for effective leadership.

As we had discussed the evolution of LMX in the theoretical background section, the study on LMX originated from vertical dyad linkage theory. Earlier studies on LMX have noted that managers and their direct reports possess variations in their relationships. Studies noted that the different professionals described the same person differently. Such differences they described in terms of “exchanges.” The professionals in organizations who reported that they possess a higher degree of trust, mutual obligation, and respect have “high-quality exchanges,” and those who possess low trust, mutual obligation, and respect have “low-quality exchanges.” Followers

having high-quality exchange relationships with the leader work beyond the requirements of the job description. Although the research on LMX evolved over the years, the main tenet lies in the above explanation. Thus, whatever the definition of LMX researchers want to specify in their papers, it must include both the elements of “relationship” and “exchange.”

When we looked into the several definitions of LMX in our targeted papers, we found different conceptualizations of the LMX construct. While most of the papers referred to the association of leader-member exchange and social exchange theory, their definitions were distinct. For example, Peng et al. (2014), Cooper et al. (2018), and Little et al. defined LMX as a “*quality of exchange relationship* between leader and follower,” while Hill et al. (2014) described it as “*quality of the relationship* between leader and follower,” skipping the “exchange” element. Some papers like Haynie et al. (2014), Liao et al. (2016), and Marstand et al. (2017) defined LMX as a “*differential quality relationship* between leader and followers,” while some papers such as Liao et al. (2017) call it a “*differential quality exchange relationship*” between leader and follower, by adding the “exchange element and differential element.” We do not find a consensus among the researchers. Regarding the conceptualizing of LMX, some call it the quality of the relationship, some as the quality of exchange relationship, some as the differential quality of the relationship, and some as the differential quality of exchange relationship.

Such variations in the definitions can be acceptable if the researchers include both “relationship” and “exchange” elements in the definition. Leadership making model (Graen et al. 1982), which is the modified explanation of LMX (Graen and Uhl-Bien 1995), also talks about “exchange” relationships. According to the model, the relationship between leader and follower commences from purely contractual economic exchanges between two strangers and moves forward toward the social exchanges between the dyads in later parts of the relationship. Such social exchanges have characteristics of loyal and supportive behavior and also involve the emotional exchanges of trust, respect, and obligation. The characteristics of LMX always include some sort of “exchange.” Thus, the definition must specify this element. When researchers define leader-member exchange without referring to any “exchange” (for example, Hill et al. 2014 defined LMX as a “*quality of relationship*”), they are moving away from the theoretical grounding of the construct and ignoring even the name of the construct leader-member “exchange.”

Graen and Uhl-Bien (1995) classified the development of LMX theory in terms of four stages. In stage one, the focus is on the exploration of differentiated dyadic exchange relationships (following vertical dyad linkage). In stage two, the focus is on the quality of exchange relationships and their outcomes. In stage three, the focus shifts from description to prescription, i.e., how can leaders and followers build a high-quality exchange relationship. And finally, the last stage considers LMX as a system-level concept. Overall, at the core of every stage, there is an exchange happening between the dyads. And the definition missing the exchange element raises issues of validity and uncertainty.

This discrepancy in the definition of LMX that we pointed out is not new; a meta-analysis by Gerstner and Day also mentioned that “researchers have little agreement

about what the LMX construct exactly is.” Schriesheim et al. (1999) and Gooty et al. (2012) also raised a similar point. We slightly disagree with the statement by Gerstner and Day. The discrepancy actually lies in reporting the definition of LMX in the recent papers by the researchers and not the actual definition.

There is a lack of clear definition in some recent papers. However, another meta-analysis, Dulebohn et al. (2011) has clarified the nomological network of LMX. Schwab (1980) mentioned that if the definition of the construct is specified and there are clear hypothetical linkages of the nomological network of the construct, it serves the purpose of specifying several parameters of the construct.

So, if we have a verified nomological network, we can infer some clarity in the construct, and at least we have won half the battle. However, we can't ignore the inconsistencies in reporting the definitions of the construct in the papers. *AMJ* and *leadership quarterly* are among the most prestigious journals. Still, they allow such irregularities in the basic definition of the construct.

Schwab (1980) highlighted that all things need to be included in the definition of a construct. He noted that researchers need to specify the nature of the construct, the meaning to be attributed, what a measure or scale of the construct would reflect, and what amount of variance is included and not included in the construct for tackling the issues of construct validity. In the definitions mentioned in our focused papers, researchers attribute different meanings to the same construct and specify them differently. Moreover, the definition does not specify at what level we must measure the construct. Some studies measured LMX at the individual level, and some studies have measured it at dyadic levels. The most prominent definition by Graen and Uhl-Bien (1995) described the construct at dyadic level. Thus, the papers which are using this construct should clearly specify the level at which they are defining the construct. Otherwise it will create more confusion regarding its nature.

58.3.2 *Measurement*

Moving forward to look into the measurement practices that our focused papers used in their research for LMX, out of the fifty-two papers, twenty-nine used the LMX 7 measure of leader-member exchange (shown in the table below). In comparison, LMX 8 (the modified version of LMX 7) is used by eight papers. LMX 7 and LMX 8 measure and operationalize LMX as a unidimensional construct. LMX-MDM scale is used by nine papers in our review. LMX-MDM considers LMX as a multidimensional construct. One paper used both LMX 7 and LMX-MDM in their research. The trend says that LMX 7 is the mostly used measure of LMX.

LMX 7 (Scandura and Graen 1984)

1. Do you usually feel that you know where you stand? Do you usually know how satisfied your immediate supervisor is with what you do?
2. How well do you feel that your immediate supervisor understands your problems and needs?
3. How well do you feel that your immediate supervisor recognizes your potential?
4. Regardless of how much formal authority your immediate supervisor has built into his or her position, what are the chances that he or she would be personally inclined to use power to help you solve problems in your work?
5. Again, regardless of the amount of formal authority your immediate supervisor has, to what extent can you count on him or her to “bail you out” at his or her expense when you really need it?
6. I have enough confidence in my immediate supervisor that I would defend and justify his or her decisions if he or she were not present to do so.
7. How would you characterize your working relationship with your immediate supervisor?

Such practice of using the unidimensional measure of the construct when Liden and Maslyn (1998) already defined LMX as a multidimensional construct is quite strange. This raises the question of whether the LMX construct is unidimensional or multidimensional.

Dienesch and Liden (1986) firstly raised the concern of the multidimensionality of LMX. They identified that there are three dimensions of LMX: loyalty, affect, and perceived contribution. But after their critique, Graen and Uhl-Bien (1995) tried to tackle the issues of multidimensionality. Specifically, Graen and Uhl-Bien argued that the majority of the studies on multidimensionality had mixed findings as studies could not find multiple dimensions in exploratory factor analysis. Also, they said that Cronbach’s alpha for a single measure (LMX 7) is in the range of 0.8–0.9, which signifies that LMX has homogeneity on a single dimension (Graen and Uhl-Bien 1995).

There are critical doubts about their last claim. Schmitt (1996) elaborated that Cronbach’s alpha is not a measure of unidimensionality. If the researchers are using alpha for this purpose, they are making a mistake, and also, if there is the presence of multidimensions for the construct, then alpha is the underestimation of even the reliability (for more details, refer to Schmitt 1996). Also, later in the paper, even Graen and Uhl-Bien (1995) highlighted that if there are dimensions to LMX, then they are trust, respect, and obligation, which they argue, are highly correlated that they merge into a single dimension of LMX.

In the later works on multidimensionality, Liden and Maslyn (1998) gave reply to Graen and Uhl-Bien’s concerns. They argued that the theoretical basis of LMX is role theory, and these roles are multidimensional. They stressed that some employees focus on the task and some on social interactions, while others might focus less or

more on both. Also, social exchange theory has identified several tangible (e.g., work-related resources like labor and raw material) and non-tangible goods (e.g., advice and friendship) of exchange. Liden and Maslyn (1998) defined the dimensions of LMX by calling them “currencies of exchange.” Hence, making inferences from Dienesch and Liden (1986), Liden and Maslyn (1998) defined four dimensions of LMX. These four dimensions are affect, loyalty, contribution, and professional respect.

Along with providing us the classification, Liden and Maslyn did several psychometric evaluations to develop the scale LMX-MDM, while the most legitimized measure of LMX, i.e., LMX 7, does not hold proof of whether it has undergone any psychometric evaluation other than assessment of reliability (Dienesch and Liden 1986; Liden and Maslyn 1998).

So, if we have a multidimensional measure, with verified psychometric properties, why are researchers using LMX 7? Bernerth and Hirschfeld (2016) argued that they are using LMX 7 *because this measure of LMX has a clear focus on social exchange*.

While developing LMX-MDM, Liden and Maslyn (1998) explicitly state that they could be criticized as the scale they have developed is not assessing exchanges. Moreover, two meta-analyses on LMX and its antecedents and consequences (Dulebohn et al. 2011; Martin et al. 2015) did not find a meaningful moderation influence of the LMX scales on the relationships. Specifically, Martin et al. (2015) found that there is no difference due in the instruments of LMX; whether it is LMX 7 or LMX-MDM, they are delivering the same results. But Dulebohn et al. (2011) mentioned that despite the similar results, we couldn't deny the theoretical distinctions between the two measures. Also, Bass and Bass (2008) mentioned that even if the two measures hold perfect correlation, we can't claim that the measure is unidimensional. Studies also targeted the theoretical foundation of LMX 7, and despite so much criticism, there has been no observable change in psychometric properties and application of LMX 7 to date, and there are still doubts about the dimensionality of the construct. This trend is also visible in our focus papers, as they are using different measures for the same construct.

The second most used measure, LMX-MDM, is also not free from criticism, as mentioned in the previous paragraph. It does not capture the “exchange” element. Gottfredson et al. also criticized LMX-MDM's not capturing ability of exchange. They said there are critical issues of validity of the measure, and it creates uncertainty about exactly what the LMX-MDM is measuring, if not exchange.

Also, Liden and Maslyn (1998) does not define the construct of leader-member exchange in terms of latent, aggregate, or profile model. Law et al. (1998) have given this taxonomy of multidimensional construct. According to Law et al. (1998), a necessary condition for any multidimensional construct is its specification of how the overall construct relates to its dimensions. If we don't establish these relationships, we cannot derive the overall construct from its dimensions. One can only research at the dimensional level. Liden and Maslyn (1998) make the same mistake while developing the measure. They did not specify the relationship between construct and its dimensions. So, how would people interpret whether the multidimensional construct exists at the same level as its dimensions or at a different level? And if it lies at the same level, how can the dimensions be algebraically combined to form a comprehensive representation of the construct? And what are the rationales behind all these claims? A solution to such ambiguity is to follow the guidelines given in Law et al. (1998) to define the LMX based on their taxonomy, which no one has done yet.

Also, the paper does not report whether the "leader-member exchange" construct is formative or reflective (terminology of MacKenzie et al. 2005). In the reflective indicator model, we refer to indicators as "effects" that reflect the underlying construct they represent. The direction of causality flows from the construct to the measures. While in the formative model, we derive the latent construct from its measures. Whether it is formative or reflective, that needs to be specified in the scale development process. Otherwise, it will cause measurement model misspecification issues. Such measurement model misspecification can lead to Type 1 or Type 2 errors (MacKenzie et al. 2005). Moreover, the standard scale development procedure given by Hinkin (1998), which Liden and Maslyn (1998), at some level, followed, will no longer be suitable if the construct is formative. It is better to check and report whether the construct is formative or reflective based on the criteria given in Mackenzie et al. (2005) before moving toward scale development to avoid ambiguity.

Lastly, we want to discuss the trend of reporting only the Cronbach's alpha in the papers while skipping the other psychometric properties. The papers that we targeted had only reported the Cronbach's alpha values. Schmitt (1996) argues that the "researchers should report alpha coefficients, the observed correlations, and the correlations corrected for attenuation due to unreliability" (p. 353). Without providing inter-item correlations, the readers won't be able to evaluate whether the reported alpha values are good or bad. Papers that used the LMX-MDM measure of LMX did not report Cronbach's alpha for all the dimensions, except for Collins et al. (2014).

Overall, we conclude that such a level of inconsistencies in defining, measuring, and reporting is a common practice in LMX research. Despite such controversies, the LMX construct is widely used in organizational behavior research. After mentioning the criticism, we also want to acknowledge the construct's usefulness. Thus, in the next section, utilizing the theoretical perspectives and definition of LMX, we applied the LMX research in the context of the gig economy.

58.4 LMX in the Gig Economy

58.4.1 *Setting the Context*

The theoretical grounding of LMX defines the construct specific to the context of traditional organizations, which generally hold the formal leader-follower relationships. LMX theory states that there are informal, interpersonal, and unstructured exchanges that occur between leader and follower *within the premises of the workplace*, which helps the followers to identify with the work and define their role within a unit in the workplace. Such description of LMX theory by Dienesch and Liden (1986) acted as an essential step in developing the LMX construct. And while describing this notion *within the premises of the workplace*, Dienesch and Liden specified the context of the LMX construct.

Not just this construct, multiple constructs available in organizational studies are context-specific and such contexts in which the research findings hold are pretty narrow (Osigweh 1989). Every concept has its level of abstraction. Based on Osigweh's (1989) terminology, if the concept is a traveling concept and covers broad classes of things, it is at a high level of abstraction. If it has a narrow coverage and is precise at a specific level, then it has a lower level of abstraction. Based on the theoretical foundation and definitions of LMX, we can check whether this construct is a traveling concept or not. Or, in other words, whether it is precise enough to apply it in some other situation. If we will be able to fit this construct in some other construct, we can get some support for the traveling nature (if it exists) of LMX. It will also guide us to define the construct LMX with some improvement.

Our goal is to apply the LMX construct in the gig economy context. The reason for choosing this context is the uniqueness of such organizations. The gig economy is usually understood to include chiefly two forms of work: "crowd work" and "work-on-demand via the app" (De Stefano 2015). The first term usually refers to working activities that imply completing a series of tasks through online platforms. Typically, these platforms contact an indefinite number of organizations and individuals through the Internet, potentially connecting clients and workers globally. "Work-on-demand via the app" is a form of work in which the execution of traditional working activities such as transport, cleaning, and running errands, but also forms of clerical work, is channeled through apps managed by firms that also intervene in setting minimum quality standards of service and in the selection and management of the workforce. I am restricting to the "work-on-demand via app" part of the gig economy.

Working in the gig economy involves acting as a freelancer in organizations. In such organizations, the client can be a physical customer, for example, in Uber or Ola, or entirely virtual such as in Amazon Mechanical Turk (Schmidt and Van Dellen 2021). Gig economy organizations are platform mediated and act like technology intermediaries connecting users and workers (Parth and Bathini 2021). The uniqueness lies in the work practices. Such firms hire workers on a piece-rate basis. But even acting as intermediaries, such firms need to manage their workforce. The traditional leader-member relationships do not exist in such firms. For most gig workers, the

official connection with the organization is just an application or platform which acts as a “leader” (Harms and Han 2019). In other words, the application takes care of the leader’s tasks, like assigning the tasks and showing directing behavior (Schmidt and Van Dellen 2021). Harms and Han (2019) referred to such practice of assigning tasks, sharing information, and evaluating and calculating compensation rates via apps as *algorithmic leadership*. AI, which acts as an algorithmic leader, has interpersonal, technical, and conceptual skills like a formal leader (Yukl 2013). Not just the works of task assignment and evaluation, an algorithmic leader can handle the job of supporting, motivating, and developing workers (Kotter 2017). The platform can persuade workers to work for longer hours. Algorithms capture leadership functions and manage lakhs of workers worldwide (Harms and Han 2019).

58.4.2 *Algorithmic-Leader-Member Exchange: A Different or the Same Construct?*

According to the popular definition of leader-member exchange, there is a differential quality of exchange relationship between leader and followers. In such exchanges processes, the employee provides quality work, a positive attitude, and compliance, and in return, the leader offers support, attention, energy, information, and time (Graen and Cashman 1975). The followers who can sustain a better quality exchange are part of the in-group, while other followers would be in the out-group. If we want to extrapolate the theory into gig economy firms, the leader will become the AI (algorithmic leader), and workers will become the followers. But what all things do these algorithmic leaders and followers exchange, and how does the algorithmic leader fulfill the duties of a formal leader?

To answer these questions, we interviewed ten gig economy workers and asked them questions about the organization’s management practices to understand their perspective on the algorithmic-leader-member exchange process. We have used semi-structured interviews to collect data. We have conducted ten interviews with ABC company workers. The following table gives some of the participants’ demographic characteristics.

	Service	Work experience in ABC	Marital status	No. of children	Qualification	Gender	Age	City
P1	Saloon men	2 years	Married	2	10th	Male	40	Ludhiana
P2	Saloon men	8 months	Married	0	12th	Male	24	Ludhiana
P3	Saloon women	8 months	Married	1	12th	Female	27	Ludhiana
P4	Electrician	2.5 years	Married	2	5th	Male	27	Ludhiana

(continued)

(continued)

	Service	Work experience in ABC	Marital status	No. of children	Qualification	Gender	Age	City
P5	Saloon men	1 year	Married	1	12th	Male	40	Ludhiana
P6	Saloon men	1 year	Married	3	10th	Male	54	Ludhiana
P7	Saloon women	8 months	Married	1	12th	Female	26	Ludhiana
P8	Saloon men	2 years	Married	1	12th	Male	42	Kolkata
P9	Saloon women	1 year	Married	1	12th	Female	28	Kolkata
P10	Saloon women	3 years	Married	2	12th	Female	32	Kolkata

In qualitative research, the goals of a researcher are to capture the experiences and voices of participants in the true sense, study them in their *natural environment*, to understand their world from their lenses with their own words (Aluwihare-Samaranayake 2012). Along with conducting the research effectively, there are also concerns about conducting research ethically. Although the ethical problems in qualitative research are more subtle than in quantitative research (Orb et al. 2001), we take care of the several ethics requirements in the present work. Doing good and avoiding harm are the two dimensions of ethics (Beauchamp and Childress 1989). There are several nuances of ethics that need to be taken care of while recruiting participants for the study, and we tried to fulfill such criteria in the present work.

In this study, the participants were approached by hiring beauty, saloon, and fan repair services typically through the ABC Company app, which was paid in full by the researcher either in cash or through the app. After booking a job, we contacted the worker and that our intention for connecting with you is regarding research work for a course in a doctoral program. Our objective is to understand the HR practices of ABC and how they manage their workforce.

Anjali Anwar et al. (2021), in their study to understand the control mechanism of gig workers, also used a similar approach to recruit participants. They hired beauty services and made requests to gig workers to participate in the research study. They gave four options to them: (a) either the person can do their beauty job and leave, (b) the person can take part in the interview without doing the beauty task they were initially hired for, (c) the person can take part in the interview along with doing the beauty task they were initially hired for, (d) they can deny both works. In all four cases, they were given their full payment. We also followed the same procedure as Anjali Anwar et al. (2021) did.

The intention for following such a procedure was to fulfill one of the criteria of qualitative research, i.e., to study the participants in the natural environment (Aluwihare-Samaranayake 2012). Such interviews in their natural environment serve

two purposes. On one end, the process does not affect participants’ time and expenses, and also reimbursement is provided in the form of calculated charges for their work. And at the other end provides the researcher with a natural environment to study the participants. Such informal contacts give access to more authentic information. Not just in the context of beauty work, in the studies on cab drivers, researchers follow similar practices for recruiting participants. Firstly they book the ride and then ask about drivers’ willingness to take part in their study. Parth and Bathini (2021) is one of the examples of such a practice. They contacted drivers during the rides that they booked for personal services.

Although such practices raise issues on ethical conduct, thus we checked some journals’ guidelines regarding recruiting participants for the study. Administrative science quarterly and the academy of management both recommended the use of informed consent while hiring human subjects for the study. Moreover, they mentioned that the researchers should also take permission from their institutes’ ethics committee before conducting works that involve any vulnerable population. Other than these two, the journals did not explicitly mention how a researcher can recruit a participant. Thus, we followed the procedure practiced by some recent similar works (Anjali Anwar et al. 2021; Parth and Bathini 2021). In the present work, we fulfilled one criterion recommended by the journals, i.e., informed consent. Firstly, we took verbal permission from the gig workers by asking them whether we could conduct this interview or not, and all the ten participants approved our request for interviewing along with recording the interviews. Participants were then given the information letter to participate in the study, and we shared a consent form asking the following questions:

Request for Informed Consent (please tick the boxes to indicate your agreement)

- I, the undersigned, have read and understood the Study Information Letter provided.
- I have been given the opportunity to ask questions about the study.
- I understand that my participation in the study is voluntary.
- I understand that taking part in the study will involve me being interviewed, and I agree to this interview being audio recorded.
- I have been given adequate time to consider my decision.
- I understand that data collected about me during the study will be anonymized before it is submitted for publication.
- I understand that I can withdraw from the study at any time, and I will not be asked any questions about why I no longer want to take part, and if I withdraw, my data will not be used in the study.

Name of participant: _____ Signature: _____
_____ Date:

To fulfill the second criteria, we will surely take approval from IIMC’s ethics committee. In the study, we assured the anonymity of participants during and after the interview process. We interviewed six participants while they were performing the job on our model. For one participant, we took just an interview without asking him to perform the job that he was booked for, and for three participants, we took telephonic interviews. All the participants were fully paid.

Participants were convenient in the local language; we took four interviews in Hindi and six in Punjabi; excerpts are translated into English. The duration of the interviews ranged from 25 to 45 min. Along with the notes and recordings of interviews, we also took some images from the workers’ app to get some idea about the algorithm of ABC. Excerpts and images are shown in the finding section of the paper.

58.4.3 Findings

The below table mentions the units exchanged between the algorithmic leader and follower.

Such exchanges are ultimately deciding who would have high LMX and low LMX values.

Items that leader (AI) provide during the exchange	Items that followers (gig workers) provide
More jobs ↔ Work quality	
Rewards ↔ Loyalty	

58.4.3.1 More Jobs in Return for Contribution/Work Quality

To direct work, the algorithm recommends tasks and restricts some actions. In the gig model, application or website-based digital platforms connect the customers and workers according to market demand and supply. These workers are classified as independent contractors, while ABC Company calls them “partners.” The platform is the agent here, which allocates work to various workers active on the platform based on customers’ requirements. Based on the interviews, we found that the workers are classified and are assigned several roles based on their work quality which is evaluated by the algorithm. They are classified as exclusive job holders, normal job holders, and five-star job holders based on their work quality. Every participant highlighted this classification; participant 1 said:

Firstly, my hub has exclusive jobs; it comes only to me. If I don’t pick my exclusive job, it becomes a normal job and my response rate decreases. **Normal jobs** - anyone can take that job. Your job was in my hub, which was visible to everyone on this hub, not just me. If the normal job is also not taken by anyone, that job becomes a **5 Star job**, and the company itself gives us five stars for doing that job even if the customer does not give us five stars.

We want to highlight here that this classification and recommendation depend on the algorithm, and workers do not have any control over it. The algorithm recommends exclusive leads, and participants noted that their ratings go down if they do not take exclusive leads. For example, participant 7 mentioned:

When we miss exclusive leads, the company will drop our ratings. Sometimes we have to ignore such leads because they are at a far distance. Also, sometimes a job costs significantly less. Sometimes it comes 15–16 km far. Sometimes clients also add incorrect locations; we have no option but to avoid the exclusive lead.

The work allocation depends on such a rating system of the algorithm. The customer rating which the name suggests has to be dependent only on the customer, but if the worker cancels a job, their rating drops by the algorithm; participants 3 and 6 mentioned:

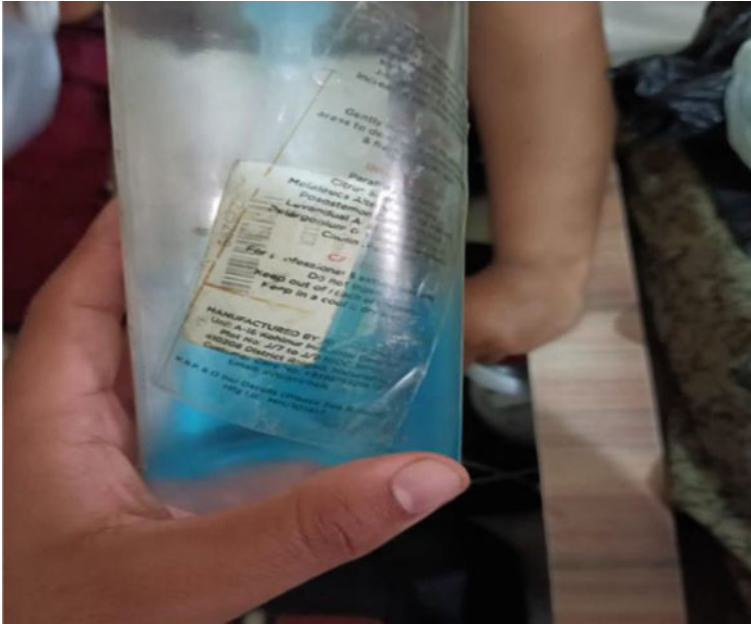
It has to be above 4.75. I will be blocked if it is 4.6. They will give us fewer jobs if our rating is low. If sometimes we cannot accept a job, our rating by the company can also be reduced. The company can also reduce our rating (P3). Sometimes if we miss jobs, then also our rating goes down. It has to be a minimum of 4 (P6).

Such evaluation is completely dependent on the work quality of the workers, shown in the worker's rating. Thus, we can say that the algorithmic leader and followers are exchanging the direction/evaluation and work quality. *Better work quality by the worker will be returned by good evaluation by the algorithm.* The workers who hold good quality exchange will be part of the in-group, and as a reward, they get more work/better earnings in the future. Participant 3 mentioned that she had become a special partner (plus partner) because of her excellent performance:

If our rating is very high, then we become **Plus Partner**. I have additional benefits. If I miss fewer jobs, the response rate is high; the rating is high, and they make us plus partners.

58.4.3.2 Rewards in Return for Loyalty

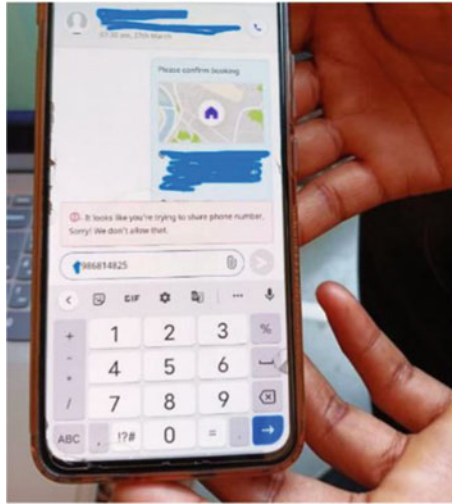
In the restrictions mechanism, the platform directs employees on what things they can do and what they can't do while performing a task. There are several restrictions regarding job cancelations; there are certain set limits of job cancelation. The workers cannot cancel more than sixteen jobs in a month; otherwise, they will be blocked from the server. Also, one participant highlighted that they couldn't buy products (products they would be used in performing a job) from outside; they have to buy them from ABC because there are bar codes pasted on the products they need to scan from the ABC app before starting a job. The following image shows the barcode present on one of the products given by an ABC worker:



Besides products, there is also a restriction to the worker in giving the personal number to the ABC company customer. Participants 5 and 6 mentioned that they couldn't work privately because their locations were tracked all the time. When we asked participant 1 whether we could book him directly (not via the app) for some work tomorrow, he replied:

You (customers) don't get the ABC worker's personal number. The number is the server's number. People are not supposed to do direct calls. We mostly don't have much time for personal work because I am booked elsewhere. I will come via app only based on my availability. When I share my personal number in the ABC chatbox, they give a warning.

The following image highlighted the warning when participant 3 tried to share his private number on the ABC app chat window:



Suppose the workers show higher levels of loyalty (in-group) by not sharing private numbers with the customers and using the ABC products only; then, in exchange, they will get rewards. If they perform the restricted work (out-group members), they might have to face replacement or dismissal. Almost every participant mentioned that their IDs would be blocked if their ratings dropped by some set standard or if they took a large number of leaves or shared their private number with the customer. And that I will be blocked for some time, during which they have to attend a punishment training session.

58.5 Discussion: LMX Versus Algorithmic-LMX

We are done with discussing the theoretical and measurement aspects of LMX. Also, we have made some inferences from the interviews for the purpose of exploring the leader-member exchange in the context of algorithmic leadership. However, we still don't know exactly how these two are different or similar. Let's start with the basic explanation of LMX.

Graen and Uhl-Bien (1995) classified the development of LMX theory in terms of four stages. In stage one, the focus is on the exploration of differentiated dyadic exchange relationships (following vertical dyad linkage). In stage two, the focus is on the quality of exchange relationships and their outcomes. In stage three, the focus shifts from description to prescription, i.e., how can leaders and followers build a high-quality exchange relationship. And finally, the last stage considers LMX as a system-level concept.

We will try to understand algorithmic-LMX using the explanation of these four. The evolution of LMX will help to generate insights for the discovery of Algo-LMX.

Stage 1: In this stage, the focus was on the discovery of differentiated dyadic exchange relationships. Some experimental findings highlight that when the direct reports were asked to describe their manager, they generated different descriptions of the same person. Those dyads who had a high degree of mutual respect, trust, and obligations, were in high-quality exchange relationships, and the leaders perceived such followers as a part of the in-group. Those in-group members act as trusted assistants of the managers and do work that goes beyond their job description.

Also, if we see the case of gig workers and platforms (algorithmic leaders), we can observe such differentiated exchange relationships. The gig workers who perform the task with quality and who stay loyal to the platform will get in return more jobs and more rewards than the gig workers who perform the task with poor quality and who do not stay loyal. Such similarity in “differentiated exchange relationships” exists in the algorithmic leader context as well.

However, there are several differences as well. In the case of LMX, the cause of differentiated exchange relationships was resource constraints at the leaders’ end (Graen and Uhl-Bien 1995). The rationale was that leaders have limited time and social resources, which restrains their capacity to develop and maintain high-quality exchange relationships with every follower. Thus, leaders have high-quality exchange relations with a limited number of followers. But we cannot assume this is the case for the algorithm since there won’t be such time and social resource scarcity in the case of the algorithm. The algorithm has the time and capacity to treat all the workers equally. Thus, in the case of algorithmic leader-member exchange, there are differentiated exchange relationships, but the reasons are not the resource constraints of the leader. In this way, LMX and Algo-LMX are different.

Also, the currencies of exchange are also different. Based on our interview findings, more jobs and rewards are exchanged in return for work quality and loyalty, while in the case of LMX’s Stage 1 explanation, the currencies of exchange are mutual trust, respect, and obligation following Graen and Uhl-Bien (1995). Based on ten interviews, we cannot make broader conclusions on this last point. Future work can find out some more currencies of exchange in an algorithmic context.

Stage 2: In stage two, the discussion about LMX shifts to the antecedents and consequences of such differentiated exchange relationships. The major findings say that the LMX relationships are affected by the attributes and behaviors of leaders and followers (Graen and Uhl-Bien 1995). Also, the dyads who possess high-quality exchange relationships generate more positive outcomes for workers, leaders, groups, and organizations as a whole.

For the first set of findings, we can assume that the antecedents to high-quality algorithmic leader-member exchange are behaviors and attributes of algorithms and workers. If workers perform quality work and stay loyal to the platform, then they generate high-quality exchange relationships with the platform. And if the algorithm exchanges more jobs and rewards in return for effective work quality and loyalty, the algorithm is stepping toward developing high-quality exchange relationships. The workers who would be getting more rewards and jobs will perceive their algorithmic

leader in a positive light. More data is required to make any judgment about the process of developing such high-quality exchange relationships.

When it comes to the consequences of high-quality Algo-LMX, this is easy to infer that if there are high-quality exchanges happening, it will be good for workers, leaders, and the organization as a whole. Good quality work and loyalty lead to more jobs and rewards, and the cycle continues. Effective completion of maximum jobs is good for both workers and the organization.

Stage 3: In this stage, the focus shifted from description to prescriptions. The studies gave a prescription on how to develop high-quality exchange relationships with every worker. In the explanation, Graen and Uhl-Bien (1995) mentioned that such a prescription makes the LMX construct equally applicable to all employees. Rather than showing its usefulness in people possessing high-quality exchange relationships, this prescription gives opportunities to every worker to attain high-quality LMX relations. The process of developing high-quality exchanges starts with being a “stranger.” In this step, there are formal interactions between members, and there are economic exchanges only. For example, complete the task which is written in the employment contract and get the salary. In the final phase, the relationship shifts from economic exchanges to social exchanges when there is high-quality LMX. The time span of reciprocity at this level is high, and there are great incremental influences.

In the case of Algo-LMX, such a phase does not arrive. The exchanges that we inferred from the interviews are economical and contractual. Doing quality work and staying loyal are requirements written in employment contracts. In return for these two, the workers get economic rewards in terms of more work and rewards (incentives).

This stage of LMX theory clarifies our doubt. Although there are differentiated exchange relationships among platforms and workers, the exchanges are economic exchanges and not social exchanges, as in the case of high-quality LMX. This is the major difference between these two constructs. We will not describe Stage 4 for LMX theory because we inferred it wouldn’t make any difference in our interpretation of LMX and Algo-LMX. We have just simply summarized the similarities and differences between these two in the following table.

	LMX	Algo-LMX
<i>Stage 1</i>		
• Differentiated dyadic exchange relationship	Yes	Yes
• Reason for differentiated exchange relationships	Resource constraints at leaders’ end	Different reasons
• Currencies of exchange	Mutual respect, trust, and obligation	More jobs and rewards in return for work quality and loyalty

Stage 2

(continued)

(continued)

	LMX	Algo-LMX
• Antecedents of high-quality LMX	Characteristics and behaviors of leaders and members	Characteristics and behaviors of algorithmic leaders and members
• Consequences of high-quality LMX	Leader, member, and organizational effectiveness	Leader, member, and organizational effectiveness
• Role making process	Yes	Insufficient data to make a judgment
<i>Stage 3</i>		
• The shift from low-quality economic exchanges to high-quality social exchanges	Yes	No
• Types of exchanges in high-quality exchange relationships	Social exchanges	Economic exchanges

58.6 Conclusion and Limitation

In the present paper, our first objective was to give a review of studies on LMX published in AMJ and the leadership quarterly in the past ten years. We reviewed fifty-two papers and found several issues in researchers’ conceptualization and measurement practices. In the last section, despite some flaws in LMX, we tried to acknowledge the construct’s usefulness by applying it in the context of gig work. In the process, we conducted some interviews and found several similarities between leader-member exchange and the newly introduced concept of algorithmic leader-member exchange. In this way, at one end, we extended the abstraction level of LMX and, at the other end, gave hope for utilizing traditional organizational behavior constructs in the context of gig work. We interviewed ten people from the same organization and from the same job role; further studies can look for a more diverse sample across organizations and across professions.

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Chapter 59

Workplace Spirituality and Pro-Environmental Behaviour in the Pharma Industry—Role of Environmental Self-identity and Environmental Transformational Leadership



Prajakta Dhuru and Amrut Dabir

59.1 Introduction

With time, the idea of sustainability has changed, and it is no longer just concerned with harmful emissions into the climate. These days, environmental, social, and governance (ESG) challenges are referred to by this general term. The pharmaceutical industry is not an exception to the pressure that consumers, governments, regulators, and the media are placing on businesses to address the three sustainability pillars in a meaningful way. 70% of 343 employees in the pharmaceutical industry who participated in a recent Global Data survey believe that more has to be done to make the industry more environmentally friendly. Further research also found that environmental issues were seen as the pharmaceutical industry's most pressing sustainability challenge (Datwyler 2022).

Environmental, social, and governance research and innovation in the pharmaceutical sector have declined in recent years. The most current statistics indicate that, compared with 590 during the same period previous year, there were 291 ESG patent applications filed in the industry during the three months that concluded in November. The number of patents associated to ESG that were awarded declined similarly to submissions, from 489 in the three months ending in November of last year to 291 this year (Data Journalism Team 2022).

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Environmental sustainability was deemed to be the area that the pharmaceutical business needs to focus on most, according to a Verdict poll. Recently, there has been more emphasis placed on the need to incorporate sustainability in the pharmaceutical industry (Pharmaceutical Technology 2021). Enterprise environmental performance is expected to be positively impacted by pro-environment behaviours (PEB) at work (Robertson and Barling 2013). That is why it is important to take PEB into account.

59.2 Objectives of the Study

Employees are one of the most important participants in the workplace, but factors that influence their behaviour have gotten little attention in PEB research. Furthermore, theoretical considerations suggest that workplace spirituality may have a substantial impact on PEB by effectively meeting employees' spiritual needs and motivating them internally. However, there are few empirical studies on this effect (Fatoki 2019). Despite the significance of organizational involvement in environmental sustainability, there has been little research on employees' PEB (Daily et al. 2009). International macro-financial systems were seriously damaged by the COVID-19 outbreak. People have been forced by COVID-19 to reconsider the relationship between people and the natural world and to assess how their own actions affect the environment. As a result, PEB is an important topic with an impact on the future (Kapecki 2020).

The research gap identified in the literature proposes a further investigation of workplace spirituality's effect on employees' PEB in the pharma industry. Empirical analyses on the determining factor of employees' PEB in the pharma industry are insufficient. This study is an attempt to extend the knowledge on the spirituality at the workplace and PEB relationship in the context of the role played by environmental self-identity and environmental transformational leadership constructed on the theory of planned behaviour (TPB) and social identity theory (SIT).

59.3 Literature Review

Workplace spirituality can be defined as the employee's experience of spirituality in the workplace. The concept of workplace spirituality refers to a work environment which is employee-friendly that cultivates and supports the spirit of the employees (Latif and Aziz 2018). Workplace spirituality helps in building a sense of oneness among employees (Gatling et al. 2016). Workplace spirituality is a contextualized phenomenon that aims to foster a sense of transcendence, community, and meaning at the workplace (Prabhu et al. 2016). Workplace spirituality is composed of integrated beliefs, attitudes, and behaviours that must encourage the followers on an internal level through membership and calling. People are motivated by spirituality at work to influence sustainability and corporate social responsibility because they feel like

their actions matter, that they are understood and valued, and that their actions have a purpose (Fry 2003). The study conducted by Kunte (2015) on pharma employees indicated that spirituality and religion have a great impact on employee's attitudes, values, and behaviour at workplace.

PEB can be carried out both at home and at work. Any direct or indirect acts a person takes at work to improve the environment are considered PEB (Ture and Ganesh 2018). Pro-environmental conduct is a type of voluntarism that actively works to address environmental problems including climate change, global warming, and environmental degradation and lessen its negative effects on the built and natural environment (Kollmuss and Agyeman 2002). PEB at work is voluntary in nature (Yuriev et al. 2018).

In environmental transformational leadership, managers share environmental concepts with their employees and position themselves as role models by placing a strong focus on environmental values and by acting in accordance with those principles (Robertson and Barling 2017). Four dimensions associated with transformational leadership are an idealized influence, followed by inspirational motivation, intellectual stimulation, and individual attention (Sarkis et al. 2013).

The label that a person applies to themselves is their self-identity. Environmental self-identity is hence the extent to which individuals believe themselves to be someone who behaves in an environmentally responsible manner. People are compelled to act in accordance with how they see themselves, therefore the stronger one's environmental self-identity is, the more likely people are to engage in a wide spectrum of PEB (van der Werff et al. 2013).

59.4 Theoretical Model and Development of Hypotheses

The theoretical model of this research demonstrates the mediating role of environmental transformational leadership in workplace spirituality and PEB relationship. Also, it demonstrates the mediating role of environmental self-identity in the environmental transformational leadership and PEB relationship. The hypotheses mentioned in the framework (see Fig. 59.1) of this study are described below. The model is based on the TPB and SIT, which are the most used theory applied theoretical frameworks on the PEB topic (Sabri and Wijekoon 2020).

The TPB states that a person's intentions to engage in a behaviour are the most immediate driver of that behaviour. In turn, attitudes, subjective norms, and perceived behavioural control all three of which influence behavioural intentions. The overall favourable or negative assessment of engaging in the behaviour is referred to as an attitude. While PBC represents the degree to which people believe their behaviour is under their volitional control, subjective standards are based on people's perceptions of whether significant others in their lives would want them to perform the behaviour (Fishbein and Ajzen 1975).

According to the SIT, an individual's sense of self is represented by a group of categories that can be split into personal identities and social identities. The individuated

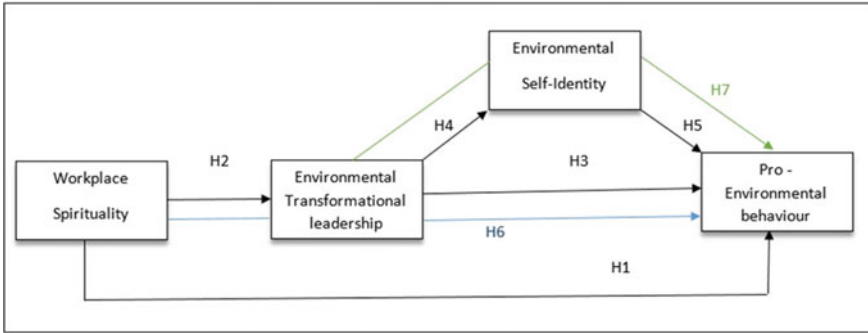


Fig. 59.1 Theoretical model

traits that make up a person’s personal identity reveal their uniqueness. Conversely, social identities signify a person’s links to significant individuals and groups and are bound to a particular social context. Theoretically, a person can actively shape their sense of self rather than only acting as a passive recipient (Ashforth and Mael 1989).

Organizations must understand how to inspire employees to take part in activities outside of their regular work duties given the voluntary nature of PEB. People’s desire to perform voluntary tasks is greatly influenced by their spirituality (Latif and Aziz 2018).

Based on theoretical framework of TPB, workplace spirituality fosters an environment where PEB is encouraged. Thus, subjective norms of employees as well as their superiors regarding PEB will get strengthened. This will help in developing the positive attitude toward PEB. As the superiors display PEB successfully, it will act as an example for employees thus increasing their confidence in their potential to exhibit PEB.

Based on the theoretical framework of SIT, we can assume that due to the identification of employee with other co-employees or leaders which drives their attitudes and behaviours, the superior’s pro environmental behaviour or the environmental transformational leadership will boost the employee’s ESI.

59.4.1 Workplace Spirituality and Pro-Environmental Behaviour

According to Abbas et al. (2020) workplace spirituality has a positive impact on the job satisfaction, particularly in the pharma industry. As per the study conducted by Afsar et al. (2016) workplace spirituality has a positive impact on employees’ PEB. According to Stead and Stead (2014) sustainability has its origin embedded in spirituality. According to Latif and Aziz (2018) workplace spirituality positively affects PEB in the workplace. A spiritual perspective motivates people to protect and conserve nature (Gatling et al. 2016).

Hypothesis 1 (H1). Workplace spirituality has a significant positive effect on pro-environmental behaviour.

59.4.2 Workplace Spirituality and Environmental Transformational Leadership

Employees' ability to innovate and be creative can be enhanced by spirituality. Workplace spirituality can help people become better leaders (Naidoo 2014). According to Afsar et al. (2016), WPS inspires people to defend nature by providing them a sense of inner purpose in life and fostering an appreciation for it, which energizes them to improve the world for both the present and the generations to come. People are inspired and motivated to preserve and defend nature when they have a spiritual perspective (Kellert 2005).

Hypothesis 2 (H2). Workplace spirituality has a significant positive effect on environmental transformational leadership.

59.4.3 Environmental Transformational Leadership and Pro-Environmental Behaviour

Environmental transformational leadership has a positive impact on the PEB of the employees (Saleem et al. 2019). Environmental transformational leadership helps by creating a good role model for employees by providing a clear vision and motivating the employees (Sarkis et al. 2013). Leaders can motivate their employees by encouraging them by setting an example for themselves. According to Wesselink et al. (2017) there is a significant positive relationship between leadership behaviour and employee PEB. According to Omarova and Jo (2022) environmental transformational leadership is essential for encouraging employees to act in an environmentally responsible manner. Businesses should ensure that leaders model environmental transformational leadership if they wish to encourage employees to participate in PEB. Employees' environmentally friendly conduct depend greatly on transformational leadership that emphasizes environmental issues (Li et al. 2020).

Hypothesis 3 (H3). Environmental transformational leadership has a significant positive effect on pro-environmental behaviour.

59.4.4 Environmental Transformational Leadership and Environmental Self-identity

The transformational leader plays a crucial role in improving environmental values in their employees (Saleem et al. 2019). By inspiring employees leaders can help cultivate pro-environmental values in them (Sarkis et al. 2013).

Hypothesis 4 (H4). Environmental transformational leadership has a significant positive effect on environmental self-identity.

59.4.5 Environmental Self-identity and Pro-Environmental Behaviour

According to Wang et al. (2021) personal biospheric values can, via environmental self-identity, predict PEB. According to van der Werff et al. (2013) strengthening environmental self-identity may be a cost-effective way to promote pro-environmental actions, as people with a more robust sense of environmental self-identity are more likely to act in an environmentally friendly way without receiving external rewards. Environmental self-identity may be a key factor in promoting PEB without external rewards.

Employees' self-identities regarding green behaviours are likely to be more strongly influenced when they witness their leaders acting in a pro-environmental manner. This is because followers who feel like they are a part of a particular unit tend to align their green self-identities with their leader's equivalent behaviours. Additionally, because work practices are often created in the workplace, employees' psychological ties to the group's environmental principles, as shaped by their leaders, may have an impact on their motivation to make environmental efforts. Because the standing of the leader is higher than that of an employee, leaders who are typically viewed as representatives of the company play a crucial role in the development and cultivation of the organization in terms of its internal working environment (Wu et al. 2021).

Hypothesis 5 (H5). Environmental self-identity has a significant positive effect on pro-environmental behaviour.

59.4.6 Mediation Effects

Given the hypothesized effects of workplace spirituality on environmental transformational leadership and its impact on PEB, workplace spirituality is expected to impact PEB indirectly. Therefore, this postulates that workplace spirituality and PEB relationship are mediated by environmental transformational leadership. Same

way environmental transformational leadership and PEB relationship are mediated by environmental self-identity. Hence, the following hypotheses are proposed.

Hypothesis 6 (H6). The relationship between workplace spirituality and pro-environmental behaviour is mediated by environmental transformational leadership.

Hypothesis 7 (H7). The relationship between environmental transformational leadership and pro-environmental behaviour is mediated by environmental self-identity.

59.5 Research Methodology

59.5.1 Research Method and Sample Description

This research used a questionnaire research method to collect the data from pharma industry professionals. The collected data was analyzed through the partial least square structural equation modelling (PLS-SEM) technique using Smart PLS-3 to test the hypothesized relationship. A simple random sampling technique has been adopted for the study. The questionnaire was distributed among the industry professionals through various means. The time frame of the data collection was from June 2022 to July 2022.

According to PLS-SEM guidelines, the sample size should be ten times the number of arrows reflected in the theoretical model (Hair et al. 2014). The theoretical model of this research contains seven arrows, thus, necessitating a sample size of 70. The actual sample size (i.e. 100) of this research is well above the requirements. Therefore, this research has a satisfactory sample size. The sample description is presented in Table 59.1.

59.5.2 Measurement

The questionnaire comprises of two sections. The first section consists of classification questions including gender, age, education, industry experience, company type, and job profile status. The second section consists of items regarding the measurement of workplace spirituality, environmental transformational leadership, environmental self-identity, and pro-environmental behaviour. All the items were measured on an 11-point Likert scale ranging from 0 (totally disagree) to 10 (totally agree). Strictly speaking, the Likert scale is ordinal in nature which is why more Likert scale points are used in order to get a closer approach to the underlying distribution so that it can be used as an interval scale (Wu and Leung 2017).

The measurement of workplace spirituality includes 21 items and was adopted from the work of Milliman et al. (2003). Sample items include “I experience joy in

Table 59.1 Sample description

Variable	Category	Frequency	Percentage (%)
Gender	Male	49	49
	Female	51	51
	Total	100	100
Age (in years)	20–30	59	59
	31–40	15	15
	41–50	18	18
	51 and above	8	8
	Total	100	100
Education	Bachelors	6	6
	Masters	91	91
	Ph.D.	3	3
	Total	100	100
Industry experience (in years)	Less than 1 year	12	12
	1–3	47	47
	4–6	5	5
	7–9	18	18
	10 and above	18	18
	Total	100	100
Company type	Indian	67	67
	MNC	33	33
	Total	100	100
Job profile	Sales	65	65
	Marketing	2	2
	Market research	24	24
	Business development	9	9
	Total	100	100

work,” “My spirit is energized by work,” and “My work is connected to what I think is important in life.”

The measurement of environmental transformational leadership includes five items and was adopted from the work of Zongbo et al. (2020). Sample items include “My manager, displays confidence about environmental issues.” “My manager talks about the importance of protecting nature.”

For pro-environment behaviour, seven items scale developed by Robertson and Barling (2013) was used. Sample items include “I print double sided whenever possible.” “I put compostable items in the compost bin.”

The measurement of environmental self-identity includes three items and was adopted from the work of van der Werff et al. (2013). Sample items include “Acting

environmentally friendly is an important part of who I am,” “I am the type of person who acts environmentally friendly.”

The scale items included in the final questionnaire are given in Table 59.8.

59.6 Data Analysis and Results

59.6.1 Common Method Bias

The most popular test used by researchers to investigate common method bias in their studies is the Harman’s single-factor test. Harman’s single-factor test is a post hoc procedure used to determine whether a single factor is responsible for variance in the data (Tehseen et al. 2017). Harman’s single-factor test revealed that a single-factor solution explains 47.36% of the total variance, which is substantially below the threshold level of 50%. The results thus demonstrate that common method bias did not significantly impair the study’s validity or alter the way the results were interpreted, see Table 59.7.

59.6.2 Construct Reliability and Validity

The measurement model displays the relationship between the construct and indicator variables. Measures of Cronbach’s alpha and composite reliability were used to test the study’s reliability. Normally, factor loading over 0.70 is recommended (Vinzi et al. 2010). Primarily, as part of the measurement model evaluation, the overall sample was assessed and the items having factor loading less than 0.70 were excluded, see Fig. 59.2. The Cronbach’s alpha values and the values of composite reliability are substantially above the threshold level of 0.70. This shows evidence of reliability. Further, all CRs and average variance extracted (AVE) values are higher than 0.70 and 0.500, respectively, which confirms convergent validity, see Table 59.2.

The HTMT ratio procedure was used to assess the discriminant validity; the values are less than or equal to 0.90 as given in Table 59.3. Discriminant validity was

Table 59.2 Reliability and validity measures

Construct	Cronbach’s alpha	Composite reliability (CR)	Average variance extracted (AVE)	rho_A
Workplace spirituality	0.971	0.974	0.728	0.977
Environmental transformational leadership	0.967	0.974	0.883	0.973
Environmental self-identity	0.759	0.761	0.675	0.761
Pro-environmental behaviour	0.787	0.789	0.876	0.789

Table 59.3 Discriminant validity measures (HTMT)

Constructs	ESI	ETL	PEB	WS
ESI				
ETL	0.33			
PEB	0.766	0.585	0.838	
WS	0.165	0.631	0.47	0.541

Table 59.4 Discriminant validity measures (Fornell–Larcker criterion)

Constructs	ESI	ETL	PEB	WS
ESI	0.822			
ETL	0.295	0.94		
PEB	0.593	0.528	0.838	
WS	0.102	0.628	0.47	0.853

also assessed through Fornell and Larcker criterion which shows that values of fact-loadings are greater than the cross-loadings, which provides evidence of discriminant validity as given in Table 59.4. Hence discriminant validity is established.

59.6.3 Hypotheses Testing

The structural model displays the relationship between the constructs in the proposed study model. The hypothesized relationships were tested, and their results are presented in Table 59.5. The results showed a significant positive relationship between all the proposed hypotheses.

Table 59.5 Direct relationships (H1, H2, H3, H4, and H5)

Hypotheses	Std. beta	STDEV	<i>t</i> -value	<i>p</i> -value	Decision
H1: WS → PEB	0.332	0.06	5.488	0	Accepted
H2: WS → ETL	0.628	0.067	9.438	0	Accepted
H3: ETL → PEB	0.528	0.1	5.26	0	Accepted
H4: ETL → ESI	0.295	0.113	2.614	0	Accepted
H5: ESI → PEB	0.478	0.0093	5.156	0	Accepted

Table 59.6 Mediation analysis H6 and H7

Hypotheses	Std. beta	Std. error	<i>t</i> -value	<i>p</i> -value	Decision
H6: WS → ETL → PEB	0.243	0.055	4.432	0	Accepted
H7: ETL → ESI → PEB	0.014	0.052	2.697	0	Accepted

59.6.4 Mediation Analysis

The results of the mediation analysis are presented in Table 59.6. The results revealed the mediating role of ETS and ESI as significant. Therefore, H6 and H7 are accepted.

59.7 Discussion and Conclusions

The study examined the role of workplace spirituality and PEB by exploring direct and mediated effect of environmental transformational leadership. The results showed a significant positive relationship between workplace spirituality and pro-environmental behaviour. The results also showed that the relationship between workplace spirituality and PEB is complementary, partially mediated by environmental transformational leadership. It is evident to note that the relationship between environmental transformational leadership and PEB is complementary, partially mediated by environmental self-identity.

59.8 Research Implications

The results of this study have some theoretical and practical implications. Concerning academic contribution, this research highlights the significance of some constructs, including environmental self-identity and environmental transformational leadership, in determining the workplace spirituality and PEB relationship. These constructs have not been explored in the above context in the extant literature on workplace spirituality and PEB relationship in the particular pharma sector. The research extends empirical evidence for the positive impact of workplace spirituality on PEB.

With respect to the practical implications, it is noticeable that workplace spirituality is essential for organizations to foster pro-environmental behaviour at the workplace. It will help motivate leaders to demonstrate pro-environmental behaviour which will in turn motivate employees. Due to their association with leaders,

employees will adopt pro-environmental values which will develop their environmental self-identity which in turn will lead to pro-environmental behaviour. The goal of managers then should be to foster a spiritual atmosphere and demonstrate and motivate the employees regarding pro-environmental behaviour. The corporate level policy designed to promote PEB must trickle down through proper training mechanism. Though spirituality is a private experience, organizations should largely focus on the spiritual capabilities and well-being of their people. The goal of managers should be to foster a spiritual atmosphere that will create a sense of belonging among employees. Since the findings indicate that WPS affects the PEB of employees, it is important for organizations to foster such an environment among employees. By creating such an environment, employees will be able to connect with the pro-environmental values and purpose of the organization, then employees will subsequently accept their leaders' vision and internalized this principle thus leading to an environmental self-identity, which ultimately results in a higher level of environmental activities at work.

59.9 Limitations and Future Research Suggestions

Limitations of the study should be recognized. Firstly, the sample of the study focuses only on the responses of the pharmaceutical industry in India. Hence a diverse perspective across other industries is missing. Further research can be developed by widening the industry and/or geographical scope; therefore, the results of this study may vary to other countries. The study is limited to the relationship between ETL and PEB with partial mediation by ESI and hence does not explore the relationship between environmental impact and economic development. The study limits to encouraging pro-environment behaviour and thus the analysis provided by Friedlingstein (2020) that China and United States contribute to approximately 50% of carbon emissions in the world is not considered. Therefore, emphasis on pro-environment behaviour may not be relevant for economic growth of a country.

Not all of the factors influencing the association between workplace spirituality and PEB are included in this study; therefore, the role of other variables may be determined as a mediator in future research. The information gathered can be skewed and reflect the study participants' opinions rather than those of the general public. The survey excluded managers' and owners' perspectives and placed a strong emphasis on employees. The generalizability of these findings is constrained by the limited sample size used in this study. Group factors and environmental group identity was not taken into account during the study.

59.10 Inferences

The study investigated the role of WS in deriving PEB by exploring mediated effects of ETL and ESI. The study tried to fill the gap by exploring the mediating effects of ETL and ESI.

Annexure

See Fig. 59.2 and Tables 59.7, 59.8.

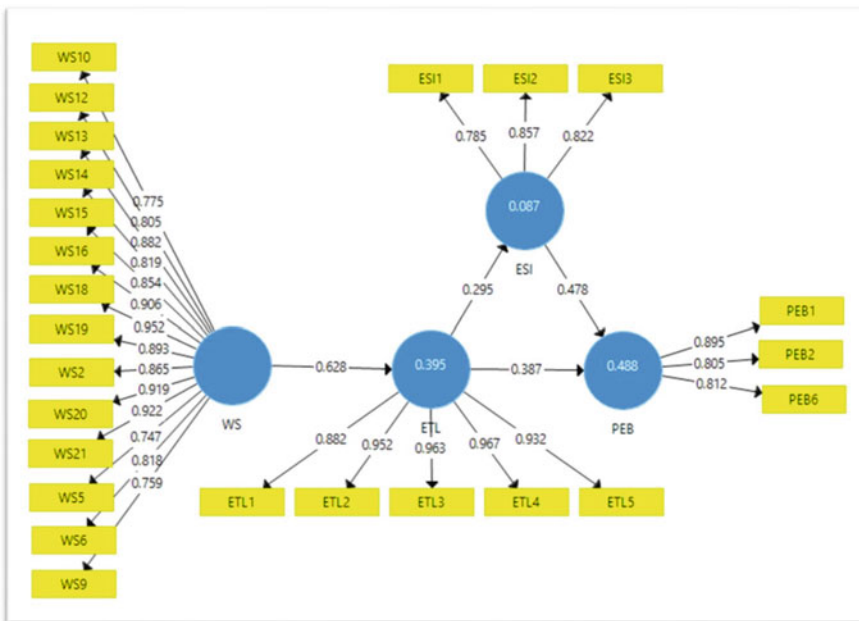


Fig. 59.2 Measurement model

Table 59.7 Harman’s single-factor test

Factor	Initial eigenvalues			Extraction sums of squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	17.421	48.391	48.391	17.052	47.365	47.365
2	3.8	10.556	58.947			
3	3.169	8.802	67.749			
4	1.859	5.164	72.913			
5	1.336	3.71	76.623			
6	1.247	3.463	80.086			
7	1.014	2.816	82.902			
8	0.862	2.394	85.296			
9	0.766	2.129	87.424			
10	0.697	1.937	89.361			
11	0.553	1.537	90.899			
12	0.503	1.397	92.296			
13	0.369	1.025	93.321			
14	0.305	0.847	94.168			
15	0.288	0.801	94.968			
16	0.258	0.716	95.684			
17	0.227	0.632	96.316			
18	0.197	0.546	96.863			
19	0.189	0.525	97.388			
20	0.175	0.486	97.874			
21	0.128	0.356	98.23			
22	0.104	0.288	98.518			
23	0.098	0.271	98.79			
24	0.091	0.253	99.043			
25	0.068	0.189	99.231			
26	0.061	0.169	99.4			
27	0.051	0.141	99.541			
28	0.041	0.113	99.655			
29	0.032	0.089	99.743			
30	0.03	0.082	99.825			
31	0.019	0.053	99.878			
32	0.017	0.046	99.925			
33	0.013	0.035	99.96			
34	0.007	0.021	99.98			
35	0.004	0.01	99.991			
36	0.003	0.009	100			
Extraction method: principal axis factoring						

Table 59.8 Scale items

<i>Workplace spirituality</i>
WPS1 I experience joy in work
WPS2 My spirit is energized by work
WPS3 My work is connected to what I think is important in life
WPS4 I look forward to coming to work
WPS5 I see a connection between work and social good
WPS6 I understand what gives my work personal meaning
WPS7 Working cooperatively with others is valued
WPS8 I feel part of a community
WPS9 I believe people support each other
WPS10 I feel free to express my opinions
WPS11 I think employees are linked with a common purpose
WPS12 I believe employees genuinely care about each other
WPS13 I feel there is a sense of being a part of a family
WPS14 I feel positive about the values of the organization
WPS15 My organization is concerned about the poor
WPS16 My organization cares about all its employees
WPS17 My organization has a conscience
WPS18 I feel connected with the organization's goals
WPS19 My organization is concerned about health of employees
WPS20 I feel connected with the mission of the organization
WPS21 My organization cares about whether my spirit is energized
<i>Environmental transformational leadership</i>
My manager
ETL1 Displays confidence about environmental issues
ETL2 Talks about the importance of protecting nature
ETL3 Talks enthusiastically about what we need to do to protect nature
ETL4 Gets me to look at environmental problems in new ways
ETL5 Provides teaching and coaching on environmental issues
<i>Environmental self-identity</i>
ESI1 "Acting environmentally friendly is an important part of who I am"
ESI2 "I am the type of person who acts environmentally friendly"
ESI3 "I see myself as an environmentally friendly person"
<i>Pro-environmental behaviour</i>
PEB1 I print double sided whenever possible
PEB2 I put compostable items in the compost bin
PEB3 I put recyclable material (e.g. cans, paper, bottles, batteries) in the recycling bins

(continued)

Table 59.8 (continued)

PEB4 I bring reusable eating utensils to work (e.g. travel coffee mug, water bottle, reusable containers, reusable cutlery)

PEB5 I turn lights off when not in use

PEB6 I take part in environmentally friendly programmes (e.g. bike/walk to work day, bring your own local lunch day)

PEB7 I make suggestions about environmentally friendly practices to managers and/or environmental committees, in an effort to increase my organization's environmental performance

Abbreviations WS Workplace Spirituality, *PEB* Pro-Environmental Behaviour, *ETL* Environmental Transformational Leadership, *ESJ* Environmental Self-Identity, *TPB* Theory of Planned Behaviour, *SIT* Social Identity Theory

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Chapter 60

Mindfulness at Workplace and Employee Happiness



Deeksha Tewari, Manish Kumar, and Santoshi SenGupta

60.1 Introduction

Ever since the turn of this century, organizations are solely trying to extract maximum productivity from the employees, irrespective of their mental and physical well-being (Gavin and Mason 2004). With the increasing globalization, technological advancement, and changing environment, employees are facing pressures resulting in anxiety, stress, and unbalanced work-life which negatively impact their performance (Cameron et al. 2003). Researchers have stressed on reversing the trend toward the dysfunctional effects on employees by focusing on positive organizational studies (Seligman and Csikszentmihalyi 2000; Luthans 2002) which has commenced a purposeful discussion between the managerial and academic fields (Filbeck and Preece 2003), resulting in increased research inquiries on employee happiness, their effects on organizational performance (Fulmer et al. 2003), antecedents that lead to employee happiness, and mechanisms behind the same.

Nowadays, organizations consider employees as one of the most significant resource and thus are sensitive and caring about their well-being and happiness at workplace. For this they think mindfulness practice is an appropriate process which is to be practiced by the employees for organizational and individual growth. Organizations are now providing unexpected level of mental happiness and social satisfaction to employees for getting amazing positivity and productivity at workplace (Moore 2017). Moreover, it results in unbiased (Wright and Staw 1999) and logical evaluation of work (Staw et al. 1994), justified and satisfactory remuneration.

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Therefore, instead of investing in satisfying working conditions, organizations are trying to practice cost-effective mindfulness interventions. Organizations seizure to mindfulness programs to confront issues around employee overall health within progressive demand in workplaces. It has been observed in the last two decades that very few studies have looked into the factors and mechanism of mindfulness at workplace. Hence, the present work aims to study on mindfulness at workplace and employee happiness. Present study aims to explore the influence or impact of mindfulness on happiness at workplace and delve into the various mechanisms by investigating the intermediating role of workplace spirituality which translate mindfulness in happiness among Indian working employees.

Though empathizing and accumulating happiness among employees continue to be an essential element for organizations, still it is an understated area of research (Benzo et al. 2018). Past literature suggests different variables such as mindfulness, healthy living, spirituality, individual traits and states in positively influencing happiness and overall well-being of employees. In the past four decades, study of mindfulness as a research setting has become indispensable and also has contributed in the developmental process of employees' perception and behavioral attitudes in organization. In addition, recent study has justified the trend of increasing mindfulness concept that combat psychological disorders (Shonin et al. 2013) and has an impact on overall happiness of an individual (Bajaj et al. 2019). While the linkage between mindfulness and happiness has been established in a few seminal works, more exploration is required to understand the relationship and association between the two intricately by understanding the mechanism between the two, and identifying and investigating mediating variable both at organizational and individual level.

Mindfulness is a vital trait for an employee but how mindfulness at workplace translates into employee happiness in Indian Context is still to be explored. Some findings depict the kind of initiatives that can be carried out by organizations to foster workplace happiness. But the picture is still blurred to comprehend what mechanism an organization in reality can implement to upraise the happiness level of an employee. As happiness concept has ignored the work environment, most of the studies on management have neglected the model and concern of employee happiness (Erdogan et al. 2012). Though, very few studies are done till date which indicates the affiliation between mindfulness and employee happiness (Malinowski and Lim 2015; Roche et al. 2014), a deep study for the mechanism of how mindfulness at workplace leads to employee happiness is still missing. Presently, there is a need for an integrative study on mindfulness at workplace and employee happiness for a developing country like India in order to outshine in highly competitive and extremely complex global economy.

60.2 Research Gaps and Contribution of the Study

Drawing from the theory of *conservation of resources* and theory of *broaden-and-build*, we attempt to explore the impact of mindfulness on happiness at workplace and delve into the various mechanisms by investigating the intervening part of workplace spirituality as a mediating variable which translates mindfulness in happiness among working professionals in India. Fulfilling the present research gap with substantial literature and methodology as discussed in next section of the paper, this work is very important as it contributes to different perspectives of management literature. Firstly, this research is the principal study that fills the knowledge void and links mindfulness at workplace and employee happiness by studying the mediating effects of organizational level variable and workplace spirituality in one comprehensive model. Secondly, this study fills geographical void as it takes Indian employees who practice mindfulness from diverse sectors and investigates the effects of mindfulness on their happiness. Studying Indian sample can give us a widened perspective about the mechanism as the cultural context of India may give us some new insights. And lastly, the study fills the methodological void by taking all conceptual and empirical papers from past literature study that further explains the effect of mindfulness on happiness.

60.3 Research Questions

RQ1: How is mindfulness conceptualized by Indian working professionals?

RQ2: How does workplace mindfulness affect employee happiness?

RQ3: What role does workplace spirituality plays in translating mindfulness at workplace into employee happiness?

60.4 Theoretical Lens

Our study is based on two different theories. One is theory of *conservation of resources* (COR) (Hobfoll 2001) and another is theory of *broaden-and-build* (Fredrickson and LaPorte 2002). COR theory recommends that for personal growth and development employees try to acquire, learn, conserve and restructure the resources on regular and systemized manner. In doing so, we theorize that mindfulness practices at workplace allows employees to develop resources such as confidence, self-esteem, etc., and get involved themselves more into work that led to enhanced happy state of their minds and job satisfaction. Similarly, the broaden-and-build theory states that when an individual frequently experiences moments of mild and positive emotions, it broadens their awareness, which over a period, facilitates in building substantial

personal resources that subsidize to their different states' well-being. With respect to such determinants, it gives wider horizon of thinking, leading to optimum utilization of resources (Fredrickson 1998, 2001) thereby enhancing their happiness and well-being of employees at workplace. Drawing from these two theories, we propose that mindfulness influences self-esteem, work engagement, and workplace spirituality which further affects employee happiness.

60.5 Conceptual Model Objective and Proposition Framework for Study

With a deep study of existing literature reviews on mindfulness and happiness at workplace, the variable that interests me as of now is workplace spirituality. The study would attempt to use this as mediating variables between mindfulness at workplace and employee happiness. From previous research, the terminology, workplace spirituality is defined as:

Workplace Spirituality—Spirituality at workplace has established a cumulative attention in past years, and particularly their effect on productivity and outcome. Literature explains spirituality at workplace as the appreciation that an employee receives from internal soul and is also encouraged by compassion, meaningful work, and mindfulness with respect to community (Ashmos and Duchon 2000). According to Petchsawang and McLean (2017), the organizations that offer mindfulness programs to employees regain positive environment and have higher level of spirituality at workplace among employees and vice versa (Figs. 60.1 and 60.2).

60.5.1 Objectives of Study

1. To analyze and explore the concept of mindfulness and happiness as applicable in Indian workplace.
2. To study the difference in mindfulness at workplace with respect to selected demographic variables such as gender, marital status, age, qualification, religion.
3. To study the difference in employee happiness with respect to selected demographic variables such as gender, marital status, age, qualification, religion.
4. To study the effect of mindfulness at workplace on employee happiness.
5. To study the mediating effect of workplace spirituality on the relationship between mindfulness at workplace and employee happiness.

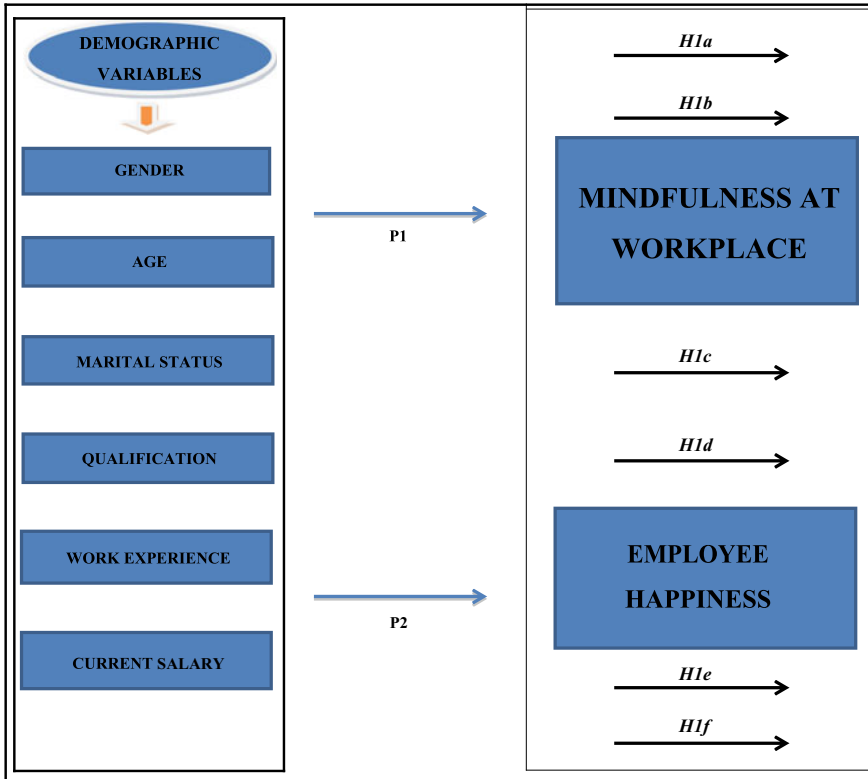


Fig. 60.1 Conceptual framework

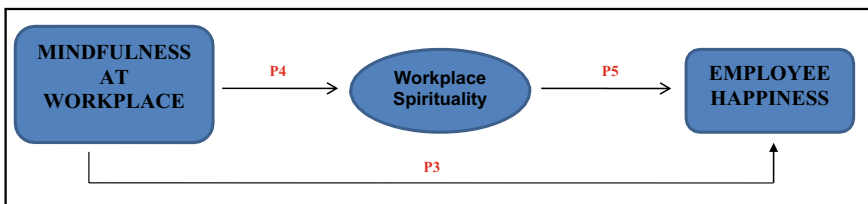


Fig. 60.2 Propositions

60.5.2 Propositions of Study

P1: There is a significant difference in mindfulness at workplace with reference to selected demographic variables such as gender, marital status, age, qualification, religion.

Table 60.1 Mapping of objectives with propositions

Objectives	Hypothesis
Objective 1	No propositions. Qualitative study
Objective 2	Prop1 (P1)
Objective 3	Prop2 (P2)
Objective 4	Prop3 (P3)
Objective 5	Prop4 (P4) Prop5 (P5) Prop6 (P6)

P2: There is a significant difference in employee happiness with reference to selected demographic variables such as gender, marital status, age, qualification, religion.

P3: There is a positive relation between mindfulness at workplace and employee happiness.

P4: There is a positive relation between mindfulness at workplace and workplace spirituality.

P5: There is a positive relation between workplace spirituality and employee happiness.

P6: Relationship between mindfulness at workplace and employee happiness is mediated by workplace spirituality (Table 60.1).

60.6 Research Methodology

Measures

Variable	Scale	Item	Sample items	Author
Mindfulness	Mindful Attention Awareness Scale	15	I could be experiencing ...	Brown and Ryan (2003)
Workplace spirituality	Workplace Spirituality Scale	22	I can easily put myself ...	Petchsawang and Duchon (2012)
Happiness	Subjective Happiness Scale	4	In general, I consider myself ...	Lyubomirsky and Lepper (1999)

- Mindfulness:** The Mindfulness Attention Awareness Scale (MAAS) consists of 15 items instrument that measures people’s tendency to be mindful of moment to moment experience. It was developed by Brown and Ryan. This scale has been shown to relate to various aspects of well-being and to how effectively people deal with stressful life events (Brown and Ryan 2003).

2. **Workplace Spirituality:** Workplace spirituality was measured with the Workplace Spirituality Scale developed by Petchsawang and Duchon. The scale consists of four dimensions with 22 items: compassion (4 items), mindfulness (6 items), meaningful work (6 items), and transcendence (5 items). All dimensions were defined and discussed with respect to Petchsawang and Duchon.
3. **Subjective Happiness Scale (SHS):** The Subjective Happiness Scale (SHS) is a four-item self-report measure developed to assess an individual's overall happiness as measured through self-evaluation (Lyubomirsky and Lepper 1999). Scores range from **1.0 to 7.0**, with higher scores reflecting greater happiness (Lyubomirsky and Lepper).

Proper instructions were given with these standardized scales, they are: The current section is a collection of xx statements about your everyday experience. Using the 1–7 scale below, please indicate how frequently or infrequently you currently have each experience. Please answer according to what really reflects your experience. Please treat each item separately from every other item.

(1 as Almost Always; 2 as Very Frequently; 3 as Somewhat Frequently; 4 as Less Frequently; 5 as Somewhat Infrequently; 6 as Very Infrequently; 7 as Almost Never).

60.7 Data Sources

Method of Study: A multi-method study will be followed for the research. Research will be done in two phases. They are as under:

Study 1: The following procedure will be adopted for qualitative study: A sample of 25 professionals (sample size should be between 5 and 30 for qualitative research) practicing meditation, yoga, pranayama, and other mindfulness exercises through spiritual groups or individually in their routine life will be contacted for interviews. A semi-structured interview schedule will be prepared for collecting responses in the form of rich text from the selected sample. Questions based on their daily routine, lifestyle, meditation habits, perception for mindfulness and meaning of happiness in workplace will be asked. Thematic analysis will be done through Nvivo and related literature to identify major themes.

Study 2: The following procedure will be adopted for quantitative study: Purposive sampling will be adopted for the study and sample size will be working professionals. Only the professionals who practice meditation, yoga, pranayama, and other mindfulness exercises through spiritual groups or individually in their routine life will be contacted to participate in the study. Using their contact and references, snowball sampling technique will be used to reach out to other professionals in their network who practice mindfulness regularly.

Questionnaire including statements based on demographic, mindfulness, happiness, self-esteem, workplace spirituality, and work engagement will be sent to all these professionals for seeking their responses. Since there are 41 items in the questionnaire, we will reach out to 10 respondents per item; making it a sample of 415 professionals. A ratio of 10:1 for the number of sampling units to the number of predictor variables appears adequate for the purpose of prediction (Halinski and Feldt 1970).

60.8 Data Analysis

Objectives	Statistical test
Objective 1	Thematic analysis
Objective 2	<i>t</i> -test, Duncan's mean test
Objective 3	<i>t</i> -test, Duncan's mean test
Objective 4	Correlations, regression
Objective 5	Structural equation modeling

60.9 Implications for Research and Practice

From the practical perspective, this study suggested six different propositions on the impact of mindfulness at workplace on employee happiness involving three mediating variables self-esteem, work engagement, and workplace spirituality in Indian context by conducting a preliminary review of related research. Through our propositions, scholars can take a guidance to initiate empirical studies to examine the impact of mindfulness on employee happiness at workplace. Further studies can be done where comparison to be executed in Indian and western context to ascertain the differences in the mindset of people regarding prospective and outcomes of mindfulness and happiness among employees worldwide.

The present study also provides serious practical implications for the academicians and practitioners. In present era, organizations respect the knowledge and competencies of their employees therefore should satisfy the employees with decent monetary and non-monetary incentives and can set higher standards with respect to qualification at the time of recruitment process. The growing industries must also take initiatives for reshaping of the work activities so as to confirm the happiness and well-being of employees. Effective strategies should be implemented in workplace to improve the levels of happiness through mindfulness exercises, recreational activities, etc. Mind and soul connecting activities should be redesigned and re-structured for the employees so as to modify the thinking process and incline the attitude of

individuals toward positivity, resulting in mental well-being and social stability of employees in organization. Moreover the study may help practitioner or manager at the time of recruitment and training programs and will also help in clearing the picture of which professions require more mindfulness at workplace.

60.10 Conclusion

Our paper contributes to the literature on mindfulness at workplace and employee happiness in Indian context. The study suggests interesting theoretic insights and useful practical implications with respect to the means to establish a healthy work environment that encourages employee's happiness and well-being at workplace. Further, the propositions formulated in the study may be analyzed by taking a sample from a particular sector, and the above propositions can be tested and the relationships between mindfulness at workplace and employee happiness can be then established.

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Chapter 61

The Nature of Virtual Leader-Member Communication and Attributes of Virtual Leader-Member Relationship: Research Note for Methodological Triangulation



Shrirang Ramdas Chaudhary

61.1 Introduction

Virtualization of the organization entirely changed how our professional and workplace relationships are formed, evolved, and sustain. Today, no employee can reliably predict where and when their co-worker will work and for what period. This very fact transforms the way relationships unfold in the workplace today (Colbert et al. 2016; Raghuram et al. 2019). Additionally, a defining characteristic of the 9 a.m. to 5 p.m. working hours would not be relevant in the future (Kraut et al. 1999; Gibson and Gibbs 2006). The advancement in Information and Communication Technology (ICT) paced up the wide application of virtual presence in diverse activities: work, education, government, and personal life. Another reason could be the global financial crisis which imposed travel budget cuts and intensified the trend of going virtually in business operations. Additionally, COVID-19 Pandemic pushed work remote and virtual almost in all sectors. Virtuality has become an integral part of our lives.

A survey conducted by FlexJobs indicated that 58% of employees said, 'they want a fully remote role post-pandemic, and 39% preferred a hybrid setting' (Pelta 2021). According to PwC's 2021 Health and Well-Being Touchstone Survey, 91% of employers said they added 'flexible work arrangements' to their employee benefits due to COVID-19 Pandemic (PWC 2021). A 2021 WeWork survey (conducted in partnership with independent research firm Workplace Intelligence) found that 79% of C-suite executives plan to allow employees to split their time between remote work and being in the office if the job allows for it (WeWork 2021).

The trends in remote and hybrid work are substantiated by the increasing adaptation of virtual work environments by organizations which concludes that flexibility

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is a top trend in the future of work (Loucks et al. 2016; McKinsey Global Institute 2017; Grampp and Zobrist 2018; Kossek et al. 2021; Adobe 2022).

The broad array of communication options, for example, email, virtual meetings, and chatrooms, ‘permit the refiguring of our organizations to meet the rapidly changing demands of the business environment.’ In virtually transforming organizations, how the future of work changes leadership and managerial requirements is a critical question (Erdkagan et al. 2006; Deloitte 2019; Robinson 2022). However, research on virtual socialization suggests that ‘one should not hold on to an inflexible view on socialization stages in virtual setting context.’ Gupta and colleagues (2022) pointed out that the stages of socialization in virtual organization denoted by ‘pre-entry experience, involvement in current activities, accommodation, and outcome appear not to exhibit the same relationship as suggested by previous studies examining socialization in physical settings.’ The very nature in which organization functions has transformed with the integration of new-age communication technology and artificial intelligence.

The new age of virtual work environments opens numerous research questions in the area of organization studies and organizational behaviors, among which organizational relationship—such as the virtual leader-member relationship—is widely studied in terms of know-what; however, how does the leader-member relationship which is also an interpersonal relationship (e.g., Brower and colleagues 2000) develop in a virtual workspace is not entirely known. This paper builds on the existing studies on virtual leadership and provided a methodological interface to investigate the nature and attributes of virtual leadership from a social constructivist and phenomenological perspective.

61.1.1 Virtual Leadership

Virtual leadership is defined as ‘A social influence process mediated by advanced information technologies to produce changes in attitudes, feelings, thinking, behavior, and/or performance of individuals, groups, and/or organizations’ (Kahai and Avolio 2020). According to this definition, the leadership process mediation by advanced information technology or virtual adaptation in leader-member exchange is a key differentiator. Interestingly, DeRosa and colleagues (2004) argued that ‘geographic distance and technological complexity are secondary to processes of virtual adaptation since communication using auditory sounds and visual cues has been the primary mode of communication in the evolutionary history of humans; humans remain the most complex and flexible part of the communication system.’ However, virtual leadership studies reviewed in this study emphasize certain process orientations, attitudinal and behavioral characteristics, and personality factors which are more effective in the virtual work environment.

A longitudinal study focused on concentrated and shared leadership behaviors in virtual teams suggested that ‘high-performing self-managed virtual teams displayed significantly more leadership behaviors over time compared to their low-performing

counterparts' (Carte et al. 2005). Authors showed that high-performing virtual teams focused on performance display concentrated leadership behaviors, whereas virtual teams focused on keeping track of group work exhibit shared leadership behaviors.

Based on a systematic literature review, Liao (2017) provided a multi-level model of leadership in virtual teams. The author suggests, at 'the team level, leader's task-oriented behaviors would stimulate multiple processes and emergent states that are paramount to virtual team effectiveness, such as: (1) virtual collaboration, (2) shared mental models, (3) trust, (4) virtual conflict, and (5) shared leadership which emphasizes how leader behaviors are related to such processes and emergent states,' whereas at the individual level, virtual leadership influences individual cognition, affection, motivation, and exchange relationships between leader and member in virtual teams (p. 654).

Endersby and colleagues (2017) presented a virtual leadership competency framework and provided four virtual leadership competencies: (1) adaptive facilitation, (2) understanding of technological amplifications of power, (3) recognition of integrated social technical processes, and (4) a nuanced understanding of technology. They suggest 'distributed power is now the truest measure of a leader (p. 85).'

Kohntopp and McCann (2020) provided five critical leadership characteristics which lead to a successful virtual organization. They suggest, leadership characteristics viz. (1) concern for the human element, (2) inspiration and motivation, (3) trust, (4) communication, and (5) training would make the organization successful in terms of productivity, retention, attendance, development, and promotions.

However, it is important to distinguish leadership emergence from assigned leadership while reviewing the existing literature on virtual leadership. An assigned leader is an individual who is assigned to a position of leadership, whereas an emergent leader is 'an individual who is not assigned to a leadership position but has the same status as other team members initially but gradually emerges as a leader through the support and acceptance of the team over some time' (Guastello 2001). Keeping this distinction in mind, the below literature accounts for numerous studies of virtual leadership.

61.1.1.1 Virtual Leadership Emergence

Leadership emergence has been previously studied in face-to-face work organizations. Based on a systematic literature review on leadership emergence, Badura and colleagues (2021) provided an integrative framework for leadership emergence research. The framework describes that the leader's perspective traits and characteristics (e.g., biological sex, race age, tenure, education), interpersonal attributes (e.g., big five personalities, positive self-concept, cognitive ability, social intelligence), leader's motivation (e.g., need for power, need of achievement, motivation to lead), behaviors (e.g., participation in discussion, task behaviors, social behaviors, boundary spanning), and other's relational attributes and associations (e.g., warmth, competence, peer liking) are antecedents to leadership emergence at the individual level and team level in an organization. Another recent study on women's leadership

emergence suggested that ‘women who tempered their agency with communion were most likely to emerge as leaders’ (Schock et al. 2019). However, the findings do not consider the contextual factor and boundary conditions of virtuality and how it would affect the formal and informal emergence of leaders in virtual teams’ interpersonal exchange.

Earlier studies on the emergence of leaders in the area of information system development indicated that ‘factors such as performance, culture, cultural ability, trust, job skills, communication ability, and co-location with clients explain the emergence of leaders in the initial stages of a project, while performance, culture, and professional skill explain the emergence of a leader in later stages’ (Sarker and Grewal 2002). Later, some studies analyzed the emergence of leadership in virtual environments by calculating the perceived leadership index score. According to this study, virtual teams are found to be in three categories, those who are leaderless, those who perceived a singular person as a leader, and those who had distributed leadership. Authors illustrate that there is a relationship between the frequency of communication and being perceived as a leader in virtual teams (Misiolek and Heckman 2005).

Scholars demonstrated that the traditional understanding of leadership emergence is irrelevant in the Internet environment, whereas Internet process variables such as ‘emoticons, Web-based initializations, and technical-speak show a strong positive relationship with leader emergence in the internet environment’ (Kelly et al. 2008). This indicates that Internet-mediated conversations which build leader-member relationships are fundamentally different from face-to-face leader-member exchanges and managers would require new skills to lead virtual organizations (Meyer 2010).

Another research on virtual leadership emergence suggests that one who exhibits communication behaviors criteria such as ‘(number of) utterances addressed to an individual, activity-related utterances sent by an individual through electronic media, and activity-related utterances addressed to an individual indicates the emergence of a leader in a virtual team’ (Sudweeks and Simoff 2010). This research highlights the relational perspective in team interaction to able someone to emerge as a leader.

Very interesting research on leadership emergence through interpersonal neural synchronization revealed that ‘leader emergence is characterized by high-level neural synchronization between the leader and followers. The study highlights that the quality of communication rather than the frequency of communications is associated with neural synchronization’ (Jiang et al. 2015). The authors underline that ‘a leader emerges in the group because they can say the right things at the right time.’ However, this study experimented with leadership emergence through face-to-face discussion in leaderless groups. Although calibrating neural synchronization in a physically distant team is a complex procedure, it proposes an interesting hypothesis on the relationship between interpersonal cognitive and affective synchronization which is reflective of neural synchronization, and leader emergence in virtual teams. At the least, this study shows the importance of quality of communication in leadership emergence.

Carter and colleagues (2015) provided a theoretical model for effective leader communications in global virtual teams. They suggest three phases—transition, action, and interpersonal. In the transition phase, effective virtual leaders would take

part in making a team, setting a course, building a skill, and communicating comprehensively; in the action phase, effective virtual leaders would observe and question and proactively do his/her work. In the interpersonal phase, effective virtual leaders would keep the work attitude and environment positive, encourage information flow, and share responsibility. However, authors configured these behavioral characteristics from the functional leadership perspective which specifies that leadership is closely coupled with creating and sustaining systemic needs and undermines the role of interpersonal motivation.

61.1.1.2 Virtual Leadership Orientation and Behaviors

Leadership is also studied through behavioral and functional perspectives. Brown et al.'s (2021) meta-analytical review suggests, the challenges of virtuality and the role of leadership in overcoming them indicate two main behavioral characteristics of a leader: task-focused leadership and relationship-focused leadership. While understanding which of the above leadership characteristics are related to high team performance, they found that 'task-focused leadership is a weaker predictor of team performance in virtual teams with high (compared to low) task interdependence, and relationship-focused leadership is a stronger predictor of virtual team performance for larger (compared to smaller) teams' (Brown et al. 2021).

Prior studies suggest that individuals who were viewed as 'leaders were perceived to be effective in taking the initiative, assigning tasks, coordinating team member efforts, and setting performance standards' (Tyran et al. 2003). Similarly, Yoo and Alavi (2004) in their study found that emergent leaders sent more and longer email messages than their team members did. The number of task-oriented messages, particularly those that were related to logistics coordination, sent by emergent leaders was higher than that of non-leaders. Notably, all these studies indicate how virtual leadership categorization is achieved by keeping the systemic need (for operations and function) as an objective of leader-member relationships.

Malhotra and colleagues (2007) identified 'six leadership practices of an effective leader in virtual teams. Those are (1) establish and maintain trust through the use of communication technology; (2) ensure that distributed diversity is understood and appreciated; (3) manage virtual work-life cycle (meetings); (4) monitor team progress using technology; (5) enhance visibility of virtual members within the team and outside the organization; and (6) enable individual members of the virtual team to benefit from the team.'

At the team level, 'task-oriented emergent leadership behaviors predicted virtual team performance, whereas social-oriented leadership behaviors predicted aggregate perceptions of team trustworthiness' (Cogliser et al. 2012). They provided 'a preliminary model that explicates how task- and relationship-oriented leader behaviors influence the team and individual processes and outcomes in virtual teams.'

An experimental study comparing the leadership emergence in face-to-face teams and the virtual team illustrated that 'four major characteristics can render a potentially significant contribution to leadership emergence in both team types: (1) cognitive

ability, (2) personality, (3) self-efficacy, and (4) comfort with technology' (Serban et al. 2015). These studies indicate that the emergence of a leader on a virtual platform is not only coincidental to communication and type of communication but also depends on the positioning (personality and ability) of a communicator.

61.1.1.3 Virtual LMX

A study from the leader-member exchange (LMX) framework compared the group's perception of its LMX relationship with co-located versus distal leaders (Kaiser 2011). This study found that there is a statistically significant difference between the LMX perceptions of the co-located and distal non-management members. They found a moderately positive relationship between virtual team efficiency and LMX for co-located teams, whereas weekly positive relationship for distal teams. In accord, Gajendran and Joshi (2012) showed that 'LMX can enhance member influence on team decisions when it is sustained through frequent leader-member communication.'

Another study proposed that 'the relationship between a leader and a team member (LMX) influences (1) the degree to which a team member is allocated resources by the leader (empowerment and group assignments), (2) the degree to which a team member develops relational resources with the team (trust, obligation, norms, and identification), and (3) the extent to which a team member receives or develops resources results in higher levels of individual performance.' The findings of the study highlight that 'building relational capital to facilitate the transformation from self to collective interest may be an effective leadership tactic when managing large virtual teams or social collectives' (Goh and Wasko 2012). Substantiating the same finding another study from the LMX perspective showed that 'e-leaders build cooperative and collaborative relationships through social-related and work-related activities in which except for internal process roles (coordination and monitoring), open systems roles, roles of rational pursuit of goals, and human relation roles have a significant positive correlation with LMX quality' (Jawadi et al. 2013).

According to Hoch and Kozlowski (2014), in virtual team, influence of hierarchical leadership practices is less strongly related to team performance, whereas structural support strengthens the team performance. A more recent study revealed that a sense of belonging and virtual leader-member exchange has a significantly positive relationship with remote employee engagement (Lartey 2022) at work.

61.1.1.4 Virtual Leadership Trait

Foti and Hauenstein (2007) examined the influence of individual differences on both leadership emergence and leader effectiveness in virtual teams. Their study revealed that 'the individual differences in intelligence, dominance, general self-efficacy, and self-monitoring were positively associated with both leadership emergence and leader effectiveness.' In another study, Balthazard and colleagues (2009)

examined ‘the role of emergent leadership in virtual teams and found that team member personality was a predictor of emergent leadership, which turned out to be a predictor of team performance.’ Specifically, they found ‘positive effects for team member extraversion, conscientiousness, agreeableness, and emotional stability in predicting individual leadership emergence.’

Previous research by Cogliser and colleagues (2012) suggested that personality traits of ‘agreeableness and conscientiousness were positively related to the task- and social-oriented dimensions of leader emergence in virtual space.’ Dulebohn and Hoch (2017) further presented an input-process-output model for virtual teams to rule out the role of personality traits on virtual leadership emergence and team performance. They showed team process and emergent states like cognitive and affective team cohesion, engagement, and shared leadership lead to the team and individual level performance and effectiveness. Additionally, satisfaction and commitment at the individual level. They also posit that ‘the relationships between team personality composition and virtual team performance are indirect, through emergent leadership and shared leadership’ (Hoch and Dulebohn 2017) and needed to be empirically tested.

Purvanova and colleagues (2021) provided a rare test of the interplay between two pathways of leadership emergence: ascription (leader’s traits) and achievement (leader’s functional behaviors) in contexts of higher virtuality. In their experimental study, they found that in low virtuality environment leaders’ traits play an important role in leadership emergence, whereas in a higher virtuality environment, leader’s functional behavior plays an important role in leadership emergence. Another study utilizes Mullen’s model of salience, motivation, and artifact ‘to compare the leadership emergence differences in virtual and face-to-face teams and found that interaction mode has an indirect moderating effect on the relation between extraversion and leadership emergence’ (Wilson et al. 2021). Irrespective of these accounts, how the leaders emerge, i.e., how leader-member relationships are formed in virtual spaces is a limitedly explored topic (Yoo and Alavi 2004).

61.1.2 Summary of Literature

The above literature review indicates two major characteristics of a leader-member relationship in virtual teams: First, the emergence of a virtual leader and the success of virtual team leadership (assigned leader) rely on communication and communication patterns. Scholars revealed these facts by adopting the network and systemic theories of the leader-member relationship. Second, one who emerges as a leader has categorical behavioral attributes (orientations) rated by their subordinates or peers, whereas while leading a successful virtual team (assigned leadership), a leader’s abilities (cognitive, affective, technical) and personality traits play a significant role. Scholars adopt functional and exchange theories of leadership to describe the relationship between a leader’s abilities and traits with successfully leading a virtual team and virtual leader emergence. Despite clear differentiation between literature

describing virtual leadership emergence and (assigned) leadership in virtual teams, there is a lack of knowledge on how abilities and traits interplay with virtual systems and virtual modes of communication resulting in the emergence and development of virtual leader-member relationships. Another notable characteristic of virtual leadership is its shared nature. Consistent accounts of literature describe virtual leadership as distributed and shared among virtual team members emphasizing the process of collaboration and coordination. However, shared leadership particularly concerns the processes and task completion; unfortunately, it lacks comprehensive accounts of the cognitive and affective characteristics of individuals in shared leadership teams.

Scholars have approached virtual leader emergence research by examining non-leader groups. Analysis of these studies is based on the leadership ratings given to each other among primarily a leaderless group; however, their leadership scale is predominantly developed for offline groups and teams. By utilizing traditional leadership rating scales, studies on successful leadership in the virtual team (assigned leadership) compared the leadership traits and exchanged them with the effectiveness and performance of the virtual team. Analysis of these studies is simply based on comparatively higher ratings by team members of certain leadership traits and abilities highlighting what kind of leaders work best in a virtual environment. Similarly, these studies argued the role of virtuality in a leader-member relationship as merely a hindrance to communication and its effect on trust and other leader-member exchange.

Scholars showed previous understanding of organizational phenomena like socialization may no longer be relevant in virtual socialization as they differ in sequence and intensity of socializing processes. This indicates a plausible change in the characteristics and processes of other organizational phenomena such as the leader-member relationship. Additionally, scholars also indicate that ‘the geographic distance and technological complexity are secondary to processes of virtual adaptation, whereas humans remain a more complex variable in terms of understanding virtual work.’

61.1.2.1 Nature and Characteristics of Virtual Leadership

Literature on virtual leadership, both assigned and emergent leadership, emphasizes the role of virtual communication and exchange; however, most of the studies examine virtual leadership from a traditional framework that is employable in face-to-face interaction or exchange. This is based on the fundamental assumption that leadership as a standard category of certain kinds of exchanges and interactions would remain the same in its attributes on a virtual platform because it is validated for close-proximity leader-member exchange. However, such leadership science undermines the role of the nature of exchange itself (in this case virtuality) in which the leader-member relationship shapes. Several research accounts indicated the altered quality and standards of virtual trust and leadership influence, but to this point, we have very little knowledge of how leader-member relationship attributes and characteristics are exhibited by using virtual communication modes. Similarly, consistent with the enigma around what contributes most—personality, abilities, or behaviors—or how

these individual attributes interplay in communication so as one emerges as a leader or successfully leads the virtual teams, I configured the need for more holistic and nuanced understanding of virtual leadership by examining both the nature of virtual leader-member communication and perception of members on the virtual leader. Doing so would also substantiate the literature on virtual shared leadership.

61.1.3 Research Questions

1. What is the nature of virtual leader-member communication? (Unraveling how power, motivation, intentions, etc. are communicated through virtual media).
2. What are the processes (anecdotes) of virtual leader-member relationship development? (Understanding the virtual interpersonal exchange between leader and others).
3. What are the perceptions of followers about a virtual leader? (Re-configuring the categories of virtual leaders).

To operationalize the proposition of this research, a study is divided into three phases.

61.1.4 Virtual Leadership Empiricism

The literature on virtual leadership is isolated into two brackets of leadership emergence in leaderless virtual teams and characteristics of a leader leading a successful virtual team; however, there is limited understanding of how leader-member relationships develop through virtual communication and interpersonal exchange on a virtual platform. Although the emergence and successful virtual team leadership provide us a hint about how it is different from our traditional understanding of the leader-member relationship, there are no significant insights into the synchronous developmental process of the leader-member relationship.

Similarly, almost all the categories and attributes of virtual leaders covered in the above-reviewed literature originated from the offline leader-member exchange with variation in their rating under the context of virtuality. Also, literature demonstrating the relationship between big five personality, interpersonal abilities with leadership emergence, or successfully leading a virtual team does not consider the effect of virtuality on the performativity of those personality traits, rather they employed the prototypes of personality by assuming virtual socialization would be similar in its process, but literature demonstrates otherwise.

Current literature on virtual leadership (both emergent and assigned) acknowledges the centrality of communication as a differentiator from the traditional leadership approach. However, no particular studies are dedicated to understanding leader-member relationship development by examining communication itself. Similarly, the

categorization of leadership (especially task/relationship-oriented in given literature) is basic categorization denoting the focus of a leader in a given situation and context—this does not imply that relationship-oriented leaders could not achieve tasks through their virtual team or task-oriented leaders are without any social interest. Additionally, the role of communication in the studies on leadership categories is limited to its significance but no study highlights the interactive and interpersonal differences of such categories, i.e., further categorization or nuanced understanding of virtual leadership is on halt.

In light of these arguments, I configured ‘a need to understand virtual leadership from the developmental perspective with a grounded theory approach. To investigate the developmental process of the virtual leader-member relationship, I propose to conduct a longitudinal study using grounded theory methodology’. A grounded theory approach is appropriate for understanding phenomena that are theoretically underdeveloped and processual, such as virtual leadership. Grounded theory methodology aims to generate the analytical schema through inductive reasoning that explains the given concept with higher abstraction.

61.2 Phase 1: Virtual Leadership Communication

Study 1 aims to understand how virtual communication (attributes and characteristics of communication) shapes the virtual leader-member relationship. The research questions spring from a theoretical assumption that views language usage as a basic component of what social relations are made of.

The previous study by Skovolt (2009) illustrated how leaders promote ingroup solidarity through strategic communication and further adopted Brown and Levinson’s politeness theory to identify a leader’s politeness strategy—the requests as wishes and hopes, rather than commands. The author closely looked for linguistic markers (contextualization cues) in the dyadic email interaction and provided the set of behavioral characteristics to promote high solidarity in virtual teams. However, this study analyzes the content of emails sent by assigned leaders only and considers email communication by subordinates as an object of reference for group solidarity. However, solidarity is often better understood as a group phenomenon; this study does not explain much about the dyadic interaction that shapes virtual team leadership. This study also clarifies to me that content analysis of dyadic interaction might not justify the objective of understanding the nature of virtual leader-member relationship development through communication. Although Skovolt’s (2009) study tends to capture the actions in the language of a leader’s communication, it fails to address how dyadic virtual communication shapes the virtual leader-member relationship.

The objective of Study 1 requires a peculiar focus on dyadic virtual communication/interaction as it is assumed to build a virtual relationship such as a virtual leader-member relationship. I figured that the social constructivist approach of conversation analysis (CA) is most suitable for the objective of the study.

61.2.1 Study 1 Method: Conversation Analysis

Conversation analysis (CA) itself developed in the 1950–60s through the discourse set out among the work of Garfinkel (1964, 1996), lectures of Sacks (Schegloff 1989; Coulter 1995), Schegloff (1977, 2002), and Jefferson (1978, 2018) to understand how conversations are structured and how those conversations structure social realities.

The CA took shape from two streams of thought: First Goffman (1983) argued that ‘social interaction constitutes a distinct institutional order comprised of normative rights and obligations that regulate interaction, and that function in broadly independent from the social, psychological, and motivational characteristics. The second is Garfinkel’s ethnomethodology’ (Garfinkel 1964) which ‘stresses the contingent and socially constructed nature both of action and the understanding of action, and the role of shared methods in the production, recognition, and shared understanding of joint activities.’

Garfinkel’s (1964) introduced the constructivist lens of social reality and introduced the concept of ‘common understanding.’ He built upon the sociological theory of *moral order*—rule governing activities of everyday life and emphasizes the familiar common sense of the world of everyday life which we often take for granted. To access this hidden world, Garfinkel indicated a need for a method that is free from the context of general psychology. He pre-established the need for conversation analysis in understanding social order within the socially constructed world.

Building on Alfred Schutz’s constitutive phenomenology (Zaner 1961) on the concepts of ‘unseen background of expectancies, Garfinkel suggests “common understanding” (common sense) would consist of a measured amount of shared agreement if the common understanding consisted of events coordinated with successive positions of events in standard time.’ He noted common understanding between members foregoes as they exchange colloquy as event-in-conversation in a given time. Event-in-conversation at a particular time constitutes the ‘matter talked about as developing and developed event over the course of action that produces it as both process and product’ (p. 228). He introduces a mode of inquiry called ethnomethodology—‘the practical methods of common sense reasoning used by members of society in the conduct of everyday life.’

According to Garfinkel, ethnomethodology can be adapted to access the knowledge and methods which society members use for daily routines. He describes the ethnomethodological study as a ‘study directed to the tasks of learning how members’ actual, ordinary activities consist of methods to make practical actions, practical circumstances, common sense knowledge of social structures, and practical sociological reasoning analyzable; and of discovering the formal properties of the commonplace, practical common sense actions, “from within” actual settings, as ongoing accomplishments of those settings’ (Garfinkel 1967, pp. vii–viii).

61.2.1.1 Turn-Taking and Sequence in an Interaction

Picking up the ontological pieces of ‘common understanding’ and ‘unseen background of expectancies’ in the operation and the manifestation of social reality, later Sacks et al. (1978) suggested that ‘language has a sociological significance because it serves as a vehicle for social action and because it can be studied in its particulars.’ They describe, ‘conversation can accommodate a varied range of situations and interactions in which persons with a variety of identities, and hidden expectancies operate. This can be sensitive to a variety of combinations and capable of changing the situation within a situation.’

Sacks and colleagues (1978) argued that the organization of taking turns in various speech-exchange systems like interviews, meetings, debates, ceremonies, conversations, etc. are the prominent social organizations. ‘To discover patterns in social interaction in order to find evidence of practices of conduct, Sacks and colleagues introduced the systematic design of context-sensitive apparatus—turns at the talk. A central feature of this procedure is that ‘the analysis of the practices used to perform a social action (e.g., using a figurative expression to close down a topic, prefacing an answer to a question with oh, or identifying a co-interactant by name in the course of a turn) can be validated through the examination of others’ responses’ (Drew and Curl 2008, p. 23). For socially organized activities, Sacks and colleagues analogously refer to the presence of turns as an economy with turns for something being valued—as their allocation affects their relative distribution, as in the economy.

Edwards and Potter (1992) pushed researchers to ‘understand how language does things, rather than treating it as providing access to the mind.’ They introduced the alternative trade to mainstream psychology called discursive psychology. In later development, based on the lessons from literary criticism and the increasing interest of psychology researchers, Schegloff configured certain themes on talk-in-interaction which led the path of conversation analysis toward the method of inquiry. He proposed that ‘the event-in-conversation has sense and import to participants which are at least partially displayed in each successive contribution (to interaction) and which are thereby put to some degree under interactional control’ (Schegloff 1997). Schegloff suggested that analysis of an event-in-conversation requires ‘a sense of context for the analysis, and these senses and aspects of context are relevant to the participants of the conversation and not necessarily relevant to the inquirer doing the analysis.’

Schegloff (2007) further institutionalizes the CA by arguing that turns do not follow one another like identical beads on a string rather they have some organization and ‘shape’ to them. He observed a group of such a series of turns seems to ‘hang together’ or cohere, and then another, and another, etc. He calls the bunch of ‘hang together’ turns topical since they all talk about the same thing. He claims that talk-in-interaction is better examined for action than for topicality, i.e., by focusing on what is it doing than what it is about.

For example, an utterance, ‘would you like some cold coffee?’ shall be examined in relation to ‘doing an offer’ than ‘cold coffee.’ The conversation further unfolds through actions emerging from the conversation.

Schegloff proposed that analyzing clumps of turns in ‘action’ terms would expose us to the course of action—sequences of actions that have some shape or trajectory to them which he called ‘sequence organization’ or ‘the organization of sequences’ (pp. 2–3).

Conversation unfolds when participants generally project (empirically) and require (normatively) the production of a ‘next’ or range of possible ‘next’ actions to be done by another participant. In the production of the next actions, participants display an understanding of a prior action and do so at a multiplicity of levels (Drew and Curl 2008). In this framework, ‘the grasp of a “next” action that the current action projects, the production of that next action, and its interpretation by the previous speaker are the products of a common set of socially shared practices. Conversation analysis is thus simultaneously an analysis of action, context, and intersubjectivity because all three of these features are simultaneous if tacitly, the objects of the participants’ actions.’

61.2.1.2 Shared Cognition, Intersubjectivity, and Organization of Repair

In his pioneering work, Schegloff (1991) highlighted the role of shared cognition in talk-in-interaction and how the speaker manages the intersubjective understanding (or lack of it) with interlocutors in a given event-in-interaction through the repair of previous utterances. These are ‘organized set of practices by which parties to talk-in-interaction can address problems in speaking, hearing, and understanding the talk.’

Shared cognition is ‘jointly produced by participants in an interaction through a series of moves in a series of moments that are each built in some coherent fashion concerning what went before, depend on some considerable degree of shared understanding of what has gone before, both proximately and distally, and what alternative courses of action lie ahead’ (p. 157). Thus, to preserve the shared understanding of the ongoing conversation, participants recurrently adopt the practices of talk and other conduct to deal with intersubjective problems of cognition in speaking, hearing, and understanding the talk. Schegloff (1977) suggested ‘such practices of repairs are properly thought of by their relationship to the source of trouble.’

Repair to talk-in-interaction happens to ‘deal with problems in the talk, including problems in shared understanding which are initiated in the turn in which the trouble or potential trouble occurs (as when a speaker stops to clarify a potential ambiguity before or just after finishing that turn at the talk), in the next turn by some other participant (a recipient for whom it may be relevant to respond), or in the following turn by the speaker of the trouble source—this is called as a third position repair.’

While demonstrating how repair-to-talk-in-interaction illustrates cues of shared understanding between participants, Schegloff (1991) explains, ‘In turns at a talk in ordinary conversation, speakers ordinarily address themselves to prior talk and, most commonly, to immediately preceding talk. In doing so, speakers reveal aspects of their understanding of the prior talk to which their own is addressed. And in

doing so, speakers can reveal to speakers of the prior talk understanding that the latter find problematic, that is, misunderstandings. When this occurs. Speakers of the misunderstood talk can undertake to repair the misunderstanding, and this can thus constitute third position repair; repair after an interlocutor's response (second position) has revealed trouble in understanding an earlier turn (the repairable in the first position). The ordinary sequential organization of conversation thus provides for displays of mutual understanding and problems therein, one running basis for the cultivation and grounding of intersubjectivity.' (p. 158). The underlying mechanism in which 'repair to utterance-in-interaction occurs stresses the orientation to the organization of activities, of conduct, and of the practices by which activities and conduct are produced and ordered.' Schegloff suggests that 'shared understanding by the coparticipants in a conversation of the import or upshot of an utterance is part of what would be meant by intersubjectivity, and this, in turn, is part of what would be meant by socially shared cognition.'

CA is founded on two principles. First, an 'interaction order' (Goffman 1983) comprising shared methods of reasoning and action (Garfinkel 1967) forms the foundation of ordinary action in the social world; and second, this institutionalized interaction order is the basis not only of social interaction but also of social institutions (Drew and Heritage 1992; Heritage 2001; Schegloff 2006; Mandelbaum 1990). They presented a collection of interdisciplinary studies which investigated the intricacies of talk and interaction within a variety of work settings or 'institutional' contexts. Methods of organization of turns and organization of sequence in interaction deepened understanding of social order to which individuals, in general, are unaware and wired socially and psychologically. These methods in CA provided an interface for linguistic and social psychology. The parallel development within CA as social linguistics, pragmatics, discourse analysis, and all other naturalistic, observation-based science of actual verbal behavior uses a recording of naturally occurring conversations as research data. In summary, CA investigates the organizations of and interconnections between four underlying characteristics of talk-in-interaction, which are: turn-taking, turn design or construction sequence and sequence organization, and action (Drew and Curl 2008, p. 25).

61.2.1.3 CA in Organization's Study

In the lateral development of the conversation analysis field, scholars indicated that the study of conversation may provide the link between micro- and macro-organizational research (Weick 1983; Mehan 1991; Gronn 1983). Scholars directed that organizational structure could be understood based on how its members embody the tacit and explicit structural features or internal and external boundaries in talk (Boden and Zimmerman 1991). Building upon this, Tulin (1998) proposed a possibility for conversation analysis in organizational behavior research. She suggests, 'potential adaptation of conversation analysis in organizational research would include validating the naturally occurring organizational talk as data and introducing appropriate frames and methods for its analysis' (p. 102). This foundational work

sets a new vertical of conversation analysis in organizational studies; however, there are limited empirical studies on the organizing of organizations.

Most recent papers on the adaptation of conversation analysis in organizational research suggest that worksite not only involves the particular details of the work but how those details either provide for or interfere with constitutive interactional requirements (Rawls 2008). For instance, trust relation and commitment to practice are required to make sense, to be an identified self, and to be seen as competent and trustworthy of others as a display of competence is also a display of trust. These underlying constitutive presuppositions in interaction are referred to as a collaborated sense-making pioneered by Garfinkel (1964). Rawls (2008) suggests, understanding this presupposition in interaction is as important as what consists of interaction. The author argues that when a company ‘re-engineers’ a worksite in ways that violets the interactional requirement for trust and constitutive practices, an organization faces lots of troubles in its organizing and functioning (pp. 723–724).

Building upon Rawls’s argument, it could be gathered that the virtualization of worksites would significantly affect the constitutive practices of interaction and the content of interaction itself, which would affect the very nature and characteristics of the organization and organizational phenomenon. Thus, conversation analysis of online conversation would be an appropriate methodology to understand the virtual organizing of organizations and various micro- and macro-organizational phenomena. On the discipline, I proposed to adopt conversation analysis of virtual interaction (WhatsApp and email conversation) to understand the nature of the relationship between managers and their subordinates.

61.2.1.4 Conversation Analysis of Digital Conversation

With the rise of computer-mediated communication (CMC), many researchers are already working on the close analysis of digital talk-in-interaction. Conversation analysis has a long history of interest in technologically mediated conversations but secured relevance much more today. Both Schegloff’s (1989) and Sacks et al.’s (1978) initial research in CA on telephone calls was indeed an analysis of technologically mediated interaction. The technological shift from telephonic communication to computer-mediated online communication occurred in the late 1990s and early 2000s. The increasing use of online communication in everyday interaction become the premise for scholars to adopt the CA on online communication. Reed and Ashmore (2000) sees online written interaction as the quintessential form of ‘naturally occurring data,’ as it is ‘considerably less mediated, more “natural” than recorded and transcribed conversations’ (2000, para. 17). Meredith and Potter (2014) suggested that analyzing online interaction would allow to us to analysis data which has been captured without any intervention of researcher, and which shows how users actually conduct online interactions.

Much of the early application of CA to CMC focused on ‘those forms of communication that most closely resembled face-to-face talk. However, Gracia and Jacobs

adopted the CA to analyze Internet-Relay Chat (IRC), a medium dubbed quasi-synchronous CMC, and used screen capture data to examine turn-taking patterns.’ They found that turn-taking patterns in IRC are notably different from those used in face-to-face conversation (Garcia and Jacobs 1999). Another adaptation of CA on prototypically synchronous CMC-instant message chat (Raclaw 2008) found that ‘the structure of turn-taking patterns demonstrated is reliant upon speaker orientation to various social and technological aspects of the medium, such as online presence and program-created automated messages.’ The analysis of their study concludes that the ways in which speakers’ close conversations are similar in structure to spoken closings in face-to-face interactions, though contoured specifically to the online medium in their application.

The technologically or digitally mediated conversations of a more recent generation provided two options—communication can be carried out by spoken words or by written messages. In last two decades have seen increasing use of Internet-based video telephone systems such as Skype and FaceTime, whereas the COVID-19 Pandemic normalizes the use of video conferencing Web application like Zoom, Google Meet, and Microsoft Teams (Shaik and Naz 2021). But at the same time, use of text-based Internet-mediated communication such as WhatsApp and email has also increased. Jailobaev and colleagues (2021) underline the multimodality of such platforms since communication through WhatsApp groups can be one-to-one communication, one-to-many, or even many-to-many.

Many earlier qualitative studies adopted digitized methods in online environments such as e-mail interviewing (Meho 2006) and virtual focus groups (Rezabek 2000). In these studies, an offline method is simply transferred to an online environment, to which Meho (2006, p. 1292) suggests ‘it is customary for researchers to discuss it in terms of the “advantages” and “disadvantages” the online mode offers.’

61.2.2 Methodological Issues in Adaptation of CA for Digital Conversation

CA was designed to account for synchronous, spoken interactions in face-to-face situations. But DCA investigates interactions that are typically neither synchronous, nor spoken, nor carried out in face-to-face situations. This makes it necessary in each case to test whether and to what extent the basic assumptions and the basic terminology of CA can be used in a DCA context.

61.2.2.1 Environment

Digital conversation analysis has a number of general concerns; one of the significant could be the environment in which conversation takes place. Schegloff (1991) explains, ‘the very things that it occurs to speakers to express, their implementation

in certain linguistic forms, and the opportunity to articulate them in sound with determine and coordinate body movements—such as gesture, posture, and facial expression—are constrained and shaped by the structures by which talk-in-interaction is organized.’ While adopting conversation analysis to structurally different digital communication such as WhatsApp chats, almost all the non-verbal cues would be missing, which means participants do not have a virtue to imply gesture, posture, tone-sound, and facial expressions during talk-in-interaction, whereas they significantly depend on the utterance or text only.

CA practitioners weigh non-verbal communication significantly high while analyzing the talk-in-interaction; however in terms of analysis of digital conversation, analytical virtue is distorted by other visual factors. While providing the example of analysis of a series of tweets, Giles and colleagues (2015) suggest ‘digital communication occurs in a particular visual context of pictures and graphic elements. They make use of color, hashtags, and emojis and are accompanied by action buttons (e.g., like or retweet).’ According to Jucker (2021), ‘whether such elements of the environment in which conversation can be ignored or whether they are significant for the analysis of the verbal interaction is an open question and cannot be answered easily.’

61.2.2.2 Synchronicity

Jucker and Dürscheid (2012) made a three-way distinction between synchronous, quasi-synchronous, and asynchronous communication. They clarify, ‘synchronicity applies only to situations in which the messages are transmitted not turn-by-turn, but stroke-by-stroke.’ In addition to the co-presence of the interactants, production, and reception of a message must take place at the same time as is the case in face-to-face interaction, in a telephone call, or in former Unix Talks in which command opens both a send window and a receive window on each user’s display. Jucker (2021) pointed out that in face-to-face conversation, participants generally plan their utterances on the fly, whereas in digital conversation, there is at least a minimum gap for planning. This gap potentially is an opportunity for correction and editing before a message is sent (Meredith and Stokoe 2014). And once a message is sent, it persists in chat and always remains available as a reference for others as what Erickson (1999) called ‘persistent conversations.’

61.2.2.3 Structure and Affordance

Hutchby (2001) introduced affordances as the aspects of technology and social integration and suggested that ‘affordances are functional and relational aspects which frame, while not determining, possibilities of agentic actions in relation to a technological object.’ They suggest that technology is an artifact that may be both shaped by and shaping of the practices humans use in interaction with, around, and through them. From a constructivist stance, he argued that technological artifacts become an important element in the patterns of ordinary human conducts; however, ‘the features

of technology can both afford and constrain the interactional potential.’ This stance has been firmly adopted by all the studies in digital conversation analysis later.

Web software applications like Twitter, WhatsApp, and Facebook have certain technical distinctions related to the structure and flow of communication. Giles et al. (2015) pointed out that the feature that allows the text of 140 characters distorts the length of the contribution and restricts the free-flowing natural conversation. In the case of a ‘Facebook thread of comments, a latecomer to the conversation can insert a response to a much earlier comment at the point where the original comment appears.’ Similarly, ‘in WhatsApp conversations, it is noteworthy that every participant is confronted on his or her communication device with a personalized version of the interaction. His or her own contributions appear in a different color and with a different alignment from all the other contributions’ (Jucker 2021). CA scholars suggest, given all these differences across different software applications, generalizations are not easily possible.

61.2.2.4 Turn-Taking, Sequence Organization, and Repair in Digital Conversation Analysis

Apart from these basic differences between spoken conversation and digital conversation, Meredith (2019) presents the current state of digital conversation analysis by reviewing studies on some key organizational features of CA such as turn-taking, sequence organization, repair, opening sequences, and embodied conduct.

Turn-Taking: Previous research demonstrates that participants in an online conversation are not able to monitor the turn in progress; they come to know about it when the turn is already completed (Danby et al. 2009). Thus, due to ‘the separation of message construction and sending, the gap between turns will necessarily be longer than in spoken interaction.’ However, this gap between turns depends on the context of interaction and could be measured in reference to other instances. For example, Kalman and Rafaeli (2011) demonstrated ‘if the gaps between turns in an interaction have been relatively short, it may well be deemed an accountable matter if there is suddenly a longer gap.’ This means in digital conversation, longer transition spaces between turn exist than in spoken conversation which depends on the technological affordance of the participants.

Similarly, participants may choose to post multiple texts with multiple orientations per se in chat rooms or WhatsApp groups. In such cases, the next turn is self-selected by the interlocutors (Panyametheekul and Herring 2003; Tudini 2010), which means once the text is sent, it is available to all recipients and is considered as the end of the turn, and recipients may treat those sent messages as individual turn construction unit (TCU) and start responding to it individually (Tudini 2015). However, recipients can find multiple TCU in longer texts and respond to each individually. Since the text once sends persists, there are no significant concerns about talk overlaps in digital conversation as it is on face-to-face communication (Garcia and Jacobs 1999). Scholars suggested that turn-taking fails if the turn goes unanswered and there may

be a pursuit of response (Licoppe and Morel 2018). Meredith (2019) suggests that ‘due to technological adaptation, participants in online interaction have found ways of constructing a “speech-exchange system” that works with the affordances of the medium’ (p. 245).

Sequence Organization: Sequence organization in digital conversation particularly concerns the disruption in turn adjacency and its impact on coherence. As previous research indicates that participants are not likely to anticipate a turn in transition, they may self-select the next turn or effectively break up the turn into multiple consecutive turns which results in disrupted turn adjacency. Garcia and Jacobs (1999) are concerned that this disruption in turn adjacency can cause misunderstanding; however, from the affordance perspective, most part users have found ways to maintain intersubjectivity. Meredith (2019) questions if this disruption in turn adjacency at all concern to conversation analysts, since previous studies accounted that participants have developed many ways to maintain coherence, across a variety of interactional contexts (Berglund 2009; Licoppe and Morel 2018; Schönfeldt and Golato 2003).

Repair: Repair in digital conversation has different functions and positions than what was previously studied in spoken conversation. Previous research on repair in chat conversation showed that participants adapt the basic repair mechanisms which are available in ordinary conversation to the technical specificities of chat communication. Schönfeldt and Golato (2003) indicated that there is no possibility for a transition space repair in digital conversation because there have already been intervening turns; instead, participants use the next-opportunity space in the chat where this repair can occur. Meredith (2014) argued the possibility of ‘message construction repairs’ which is not visible to recipients, but participants may edit their messages-in-progress in response to something posted by another participant (Garcia and Jacobs 1999).

Repairs in online interaction can be used to repair a misspelling or an error of some kind, although this is not their only purpose. Markman (2005) pointed out that the existence of repair during message construction indicates that participants monitor the conversation and edit their posts when responding to something posted by their co-participant. Repair in digital conversation happens through the deletion of a message as well. Beisswenger (2008) indicated that deleting is an indication of an individual restructuring of intended actions in cases in which a recent update of the individual mental communication protocol makes this seem essential to the participant to repair. Meredith (2019) highlighted that next-opportunity space repairs can be either self- or other-initiated but are most commonly self-completed with lower possibilities of more repairs. She suggests the need to consider having different terminology for repair work—‘next-opportunity space repair,’ rather than ‘third turn,’ ‘transition space,’ that is completed during message construction of the turn (p. 250).

Embodied Conduct: Previous CA research has found that in online interaction, participants employ way to represent embodied conduct. In the late 80s, the use of a combination of punctuation to convey facial expressions (such as :) :D ;0 ;:(

:l :x) became common. These combinations are called emotion icons—emoticons. Later, these emoticons developed into smilies—images that represent emoticons, while today, we have a variety of ‘emojis’ that can indicate a speaker’s mood or stance toward a particular part of the interaction (Al Rashdi 2015; Pérez-Sabater 2019). In his book, Crystal (2001) revealed that punctuation can be used to represent the turn’s stance or tone; for example, a double question mark (??) might indicate surprise or incredulity when asking a question. Martey and Stromer-Galley (2007) found out that other typographical resources, such as capital letters, may be used as a resource to indicate tone, which may be understood as shouting or potential excitement (Meredith 2014).

Although, emojis have been vastly studied in other domains of research such as pragmatics and discourse analysis; CA scholars have emphasized that ‘emoticons are usually understood depending on the sequential and interactional context in which they are used’ (Markman and Oshima 2007; Meredith 2014). The analysis of a corpus of naturally occurring WhatsApp conversations written in Spanish provided evidence that emojis play important interrelated roles across the domains that identifies as key to the management of rapport among individuals (Sampietro 2019). The author suggests the use of emojis to open or close a conversation (with or without textual content) or to give the floor to the interlocutor. Previously, Meredith (2014) also showed that ‘smilies posted at the start of a turn indicate a stance toward the previous turn, whereas a smiley posted at the end of a turn indicates a stance toward one’s own turn, providing information to a recipient on how it should be understood. When used in this way, emojis primarily contribute to achieving a successful interaction between the interlocutors.’

61.2.3 *Methodological Scope*

It is evident from previous research that ‘there is a turn-taking system, which is different from spoken interaction and also may differ across platforms but equally shows how participants can adapt to many interactional contexts’ (Meredith 2019, p. 253). While doing digital conversation analysis, Giles and colleagues (2015) suggested that researchers’ first ‘priority should be the development of a methodological approach for the currently established and durable forms of online interaction: e.g., Facebook, Twitter, discussion forums, email, text messaging/WhatsApp, and instant messaging/chat. “Digital conversation analysis” could build on the already existing CA studies of online data and be further developed based on the huge body of knowledge gained by conversation analysts in their studies of talk through various media (e.g., face-to-face, telephone, and radio)’ (p. 49).

Based on the comprehensive literature review of 89 peer-reviewed journal articles, Paulus and colleagues (2016) advised that the prevalence of studies that draw upon naturally occurring online talk in conjunction with other sorts of data (e.g., interviews, surveys) and/or use CA in conjunction with other forms of analysis may be worth

exploring in more depth to better understand the questions that can be answered through innovative research designs.

Jucker (2021) further argued that ‘the affordances of instant messaging are different from those of spoken interactions. They force the analyst to reconsider the terminology and the basic mechanisms of turn-taking and the sequencing of communicative acts. But the tools also bear the risk that they are uncritically applied to a new context and thus violate one of the basic tenets of CA that the analyst must approach his or her data without preconceived ideas and predefined analytical categories’ (p. 100520).

While explaining the basic tenets of conversation analysis of spoken conversation and the role of shared cognition, Schegloff (1991) shared one of the concerns ‘to enrich our capacity to analyze ordinary conversational interaction in a way that can account for the actual course that particular episodes of interaction take and that can capture the orientation of the participants to it.’ However, in digital chats, the persistence of text allows the analyst to investigate perpetual cues for a course of a certain episode of interaction. Although the sequence of turns in digital conversation is always at a risk of disruption, analysts can detect the orientation or change in orientation of participants in digital chats.

61.3 Phase 2: Methodological Triangulation

The studies which adopted CA on virtual talk mainly focused on four primary aims: (1) comparing face-to-face (F2F) with online talk; (2) understanding how online talk is coherent to participants; (3) understanding how participants deal with trouble in online talk; and (4) understanding how participants accomplish social actions in asynchronous environments (Paulus et al. 2016). However, studies in organizational setup are limited to library chat reference studies (Koshik and Okazawa 2012) and a study of emoticons in workplace email (Skovholt et al. 2014).

In the primary phase of developing this study, I wondered how I could design a study that would explore the nature of virtual leader-member relationships as well as their characteristics. I delved into the literature about different methods and theories on discursive analysis and phenomenological research but did not find a single study that focuses on virtual phenomenological experiences and discourse equally. Consequently, I decided to use two methods: one from the social constructivist stance—Conversation Analysis and the other from the phenomenology—Relationship Anecdotes Paradigm. However, this raised new questions regarding the consequences of combining the introspective phenomenological approach and context-sensitive conversation analysis.

Practicing CA scholars drew a parallel interface between conversation analysis, phenomenology, and heuristics which provides opportunities to seek sociopsychological attributes behind turn-taking and sequence organization in an interaction.

An interpretive phenomenological approach to analysis requires formal coding of interaction through introspection based on already established theoretical frameworks in mainstream psychology which is ‘a top-down process that is not grounded in CA.’ However, Stivers (2015) argues that ‘the formal coding of behavior in interaction is not necessarily antithetical to conversation analysis.’ She suggests that ‘CA provides a dual reliance on position and composition in its analysis of interactional practice.’ According to Stivers (2015), the adaptation of CA as the primary stage of interaction analysis will narrow down the frame in which a particular phenomenon event or action emerged, which makes coding both compositionally and positionally sensitive.

Similarly, Garfinkel’s proposal that ‘mutual understanding (orienting objects, meaning, and identities) in interactions, including technical situations of work, requires constant mutual orientation to situated constitutive expectancies—taken-for-granted methods of producing order that constitutes sense—accompanied by displays of attention, competence, and trust.’ Such orientation to turn-taking is described as a position that further ascribes social action through membership categorization in an interaction.

Membership categorization analysis (MCA) is a sister branch of ethnomethodology that has primary interest in categories or ‘topical’ (e.g., gender, sexuality, ethnicity, identity) rather than sequential issues. Stokoe (2012) noted that ‘MCA focuses on “members” methodical practices in describing the world and displaying their understanding of the world and the common sense routine workings of society through turn-generated “identities-for-interaction,” morality, culture, and other categorical matters, whereas CA specifies the normative structuring and logics of particular courses of social action and their organization into systems through which participants manage turn-taking, repair, and other systemic dimensions of interaction.’ While reintegrating these analytically divergent approaches of ethnomethodology, Stokoe (2012) focuses on ‘speakers’ explicit and largely unambiguous uses of categories, across numerous datasets to investigate the “category-generated features” that get tied to participants; the actions they accomplish; the local and cultural meanings they acquire, maintain, or transform; and the overarching patterns in their use. She argues, social action in interactions is influenced by the pre-disposed orientation (social categorization) of the speaker.’

Further, substantiating the role of epistemics in interaction on the ground of hidden (interactional) order, Drew (2018) argued that the relevance of epistemics is evident in how knowledge claims and attributions of knowledge to self and others (1) are embedded in turns and sequences, (2) inform the design of turns at talk, (3) are amended in the corrections that speakers sometimes make, to change from one epistemic stance to another, and (4) are contested, in the occasional ‘struggles’ between participant. Drew claims, ‘epistemics is not at all a hidden order, and that instead participants’ orientations to epistemic status and stance are manifest in their epistemic claims and attributions, in how epistemics is embedded in turns and sequences, in turn, design, in the amendments they make concerning their epistemic status and stance, and in the interactional contests between participants about knowledge’ (p. 182).

Pragmatics is another analytical method in linguistics which is founded on ‘the importance of taking context into account in matters of assessing whether and how utterances are judged to be well-formed. By introducing the importance of pragmatic context as being as or more salient in our understanding of utterances than grammatical and semantic rules of linguistics.’ Drew (2017) suggests that ‘CA adds to the pragmatic notion of context that of the sequential context; so that turns or utterances are understood as moves in an unfolding process of (sequences of) interaction.’ He argues that ‘language delivers action, not meaning,’ whereas the meaning of language is not primarily descriptive but is used to conduct actions or activities in interaction; hence, speech acts as the linguistic correlate of physical actions (p. 80).

In a recent study, Rossi and Stivers (2021) showed ‘how social categories become visible through the actions that people perform in interaction, particularly through the rights and constraints associated with people’s everyday cooperation and handling of objects and possessions’ (p. 50). They introduced the term *category-sensitive action* in an interaction which indicates ‘certain actions are governed by social norms tied to membership in social categories, including how rights may be borrowed or shared across related categories.’

Another attempt to substantiate the conversation analysis method for understanding the experiences of organizing through interaction is provided through the concept of recruitment and organization of assistance in an interaction. Kendrick and Drew (2016) argue that our social life is driven by assistance from each other. They introduced the concept of recruitment to encompass the linguistic and embodied ways in which assistance may be sought—requested or solicited—or in which we come to perceive another’s need and offer or volunteer assistance which develops social cohesion and solidarity resulting in the organization of assistance.

These studies demonstrating positioning behind turn-taking, social categorization, category-sensitive actions, recruitment, and organization of assistance substantiated the role of mind attributes in the organization of actions in interaction. Drew (2013) suggests, there is no longer the primary focus of CA research, rather action construction has risen to the top of the CA agenda.

These studies and other recent studies on the cognitive mechanisms underlying predictive turn-taking (De Ruiter et al. 2006; Keitel et al. 2013; Levinson 2016) and ‘the use of quantitative methods to find universal norms of human interaction’ (Dingemanse et al. 2013; Stivers et al. 2009) are all examples of a fruitful synthesis of the empirical rigor of CA and the methodological flexibility of psychology.

Frost and Nolas (2011) addressed that ‘people’s experiences are multidimensional and the worlds that we inhabit are much more multi-ontological than a single theory and method allow us to appreciate. They suggest, our actions, feelings, and thoughts intersect with issues of power, identity, meaning-making practices and interpretation, and practical, material challenges, all at the same time. As such, a framework of ontological and epistemological multiplicity and multidimensionality would be both appropriate and helpful in understanding such a reality’ (2011, p. 116). Frost and Nolas provide a pluralistic methodological and theoretical framework, in which different methods and theories are used to illuminate the multi-layered complexity of phenomena.

61.4 Study 2: Virtual Leader-Member Relationship

The aim of Study 2 is to explore the interpersonal dynamics between a leader and a member in a virtual work environment. Grounded theory methodology prescribes narrative methods to find out emerging patterns of personal experiences. The proposed research requires the analysis of the individual perspectives of each entity in a dyad relationship. One such method is utilized in the core conflictual relationship theme (CCRT).

The core conflictual relationship theme was first developed by Luborsky for solely clinical therapy. He describes CCRT as ‘the central relationship pattern, script, or schema that each person follows in conducting relationships’ (Luborsky 1998). The method is firmly rooted in clinical experience and close observation and takes support from the theory-driven method of Freudian psychology. In the therapeutic clinical approach, ‘CCRT is the recurrent conflictual interpersonal pattern that clients experience in their daily life. The CCRT is an internal representation of clients’ relationships with parental figures that play out in their subjective experiences in current relationships. Since it is a therapeutic tool, it helps individuals to become aware of their disposed patterns of attitude which play out in their current relationship. For such purpose, Luborsky adopts the classical theory of Freudian psychodynamics.’

For the given research purpose, my interest in the tool is limited to ‘the recurrent conflictual interpersonal pattern that clients experience in their daily life. Further, rectifying the concept, I seek to identify and understand *‘the recurrent interpersonal patterns that individuals experience in workplace relationships every day.’* CCRT is formulated based on the Relationship Anecdotes Paradigm (RAP). RAP was introduced by Luborsky as the common narrative practice of multiple sources for non-therapeutic practices. Relationship Anecdotes Paradigms (RAP) interview could be ‘applied to almost any sample of people and could serve to elicit narratives to use as data for the same variety of purposes as the narratives drawn from psychotherapy’ (Luborsky et al. 1992). In his book, Luborsky guides that ‘In RAP interview, the narrator tells about actual events in relationships with other people. Each narrative is an account of a specific interaction with a specific person. The narrator is free to tell a narrative about any relationship episode, present or past, and is encouraged to describe the episode concretely and to include a sample of conversation with the other person: what the narrator said, what the other person said, and what happened at the end of the interaction.’ (pp. 298–299).

RAP interview techniques further evolved into non-therapeutic setups and are also referred to as relational episode interviews (Dahlbender et al. 1993). Schurr et al. (2008) discussed a framework that analyzes interaction episode patterns that culminate in business relationship changes. They defined interaction as the building blocks of episodes and discussed the meaning and implications of episode valences; Schurr formulated their framework based on the critical incident technique which focuses on the critical events in which the change in a relationship takes place. Schurr applied

Table 61.1 Methodological synthesis

	Relational perspective	Entity perspective
1. Paradigm (ontology)	<i>Leadership is socially constructed</i> —emerging as the result of variant social interactions	<i>Leadership is a perception</i> —lies in the mind of a leader and a member
2. Focus: methodology	Characteristics of communication	Characteristics of mind
3. (Epistemological positions)	Leadership can be understood from the <i>patterns of interactions</i> between individuals in a group	Leadership can be understood from <i>the perception, motives, desires, and needs</i> of individuals in a dyad
4. Directions	Finding the nature of virtual leader-member relationship (VL)	Finding the attributes of virtual leader-member relationship (VL)
5. Methods	(Virtual/digital) conversation analysis	Relationship Anecdotes Paradigm (Luborsky 1998)
6. Sources/tools	Synchronous Zoom meetings, live chat; asynchronous data—WhatsApp chat, email conversation, Chatbox	In-depth interviews of each individual in the dyad, picking the relational episodes between them
7. Analysis	Relationship visualization and profiling	Open and axial coding-theme building

the concept of interaction episodes in terms of a business relationship from the lenses of the criticalness of a certain interaction or situation. However, no studies are dedicated to organizational setup to investigate organizational relationships. I proposed to adopt the relationship anecdote interview paradigm to understand the relational characteristics that constitute a virtual leader-member relationship (Table 61.1).

61.5 Discussion

The existing literature on a leader-follower relationship can be differentiated based on their explanatory discourse—entity perspective and relational perspective. Entity perspective assumes individual agency—that ‘organizational life is viewed as the result of individual action’ (Hosking 1995), whereas ‘relational’ orientation starts with processes and not persons, and views persons, leadership, and other relational realities are intersubjectively and interdependently made in processes (Bradbury and Bergmann Lichtenstein 2000) (Fig. 61.1).

Leader-member exchange (LMX) is the first theory that took the relationship approach to leadership, but it is not to confuse relational leadership. LMX theory focuses on the behavior of individuals as they exchange between them and thus describe entity perspective (Dachler and Hosking 1995). According to LMX theory,

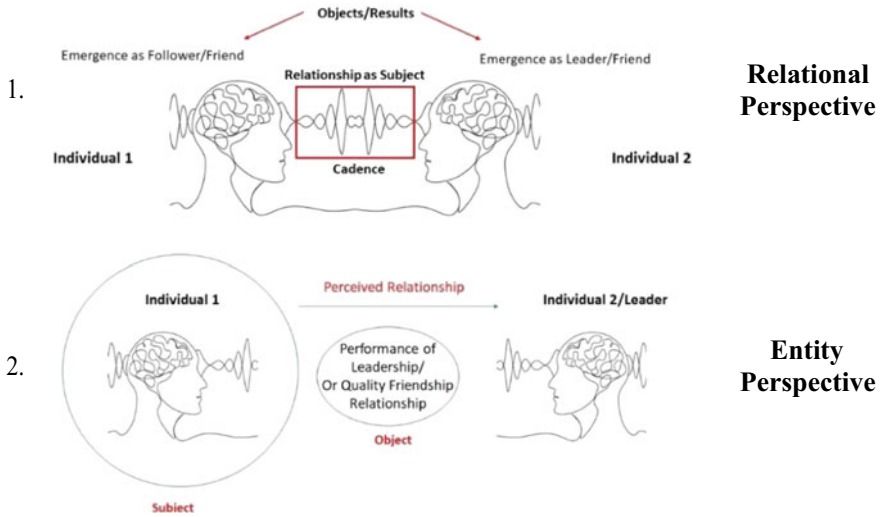


Fig. 61.1 Entity versus relational perspective of leadership research

‘the nature of the exchange between leader and member depends on (1) the characteristics of both leader and member including personal, physical, and psychological characteristics, and (2) the individuals’ expectations of the exchange, which are developed based on experience and outside information about the other, (3) and it depends on individual assessment of and reaction to the exchange both while it is occurring and in retrospect’ (Uhl-Bien et al. 2000).

Unlike the LMX and Hollander’s relational approach to leadership, ‘the relational orientation of leadership focuses on the social construction processes by which certain understandings of leadership come about and are given ontological focus’ (Meindl 1995). Relational orientation suggests organizational phenomena exist in interdependent relationships and intersubjective meanings. Meaning that is configured with knowing which occurs between two individuals simultaneously. Thus, a significant experience between two may have different meanings and perspectives continuously emerging (Bradbury and Bergmann Lichtenstein 2000, p. 552). Uhl-Bien (2006) identified ‘relational leadership as a social influence process through which emergent coordination (i.e., evolving social order) and change (e.g., new values, attitudes, approaches, behaviors, and ideologies) are constructed and produced.’ Relational leadership theory does not restrict to hierarchical positions or roles; instead, it views leadership as occurring in relational dynamics throughout the organization.

Hosking and Bouwen (2000) explains, ‘in entity perspective, processes are centered in individuals’ perceptions and cognitions as they engage in exchanges and influence relationships with one another, while the relational perspective views persons and organizations as ongoing multiple constructions made “in” processes and not the makers “of” processes.’ From the lenses of social influence in network,

Uhl-Bien (2006) accounted that relationship dynamics enable structuring or organizing—social orders—like leadership in organizations through regular interaction with one another. Thus, leadership is a social order which organically emerges as a pattern of interaction between two (p. 672). He proposes to investigate various relational dynamics by which leadership is developed throughout the workplace.

In the proposed study, in phase one, I take a relational perspective while adopting the conversation analysis for the investigation of the nature of the virtual leader-member relationship. As Stivers (2015) suggested, conversation analysis would reveal numerous episodes of actions in interaction which could be further treated as anecdotes for relationship anecdote interviews in a narrower phenomenological inquiry. This methodological triangulation of conversation analysis with interpretive phenomenology would provide a unique interface to investigate virtual leadership from both a relational perspective and entity perspective giving a holistic picture of the new-age virtual leader-member relationship.

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Chapter 62

A Study of Unethical Practices to Attain Positions on Leader Board



Chandan Medatwal and Arnab Borthakur

62.1 Introduction

Unethical practices in businesses may be defined as act of doing which stands below the stated standard code of business code of conduct. It even includes such behaviors too which are widely accepted of being morally wrong and lead to misrepresentation of facts, ill-treatment with people and environment too.

This study examines the issue of unethical behavior in the pursuit of high rankings on leader boards. The study aims to identify the types of unethical practices used, the motivations behind them, and the impact they have on fair competition and the overall integrity of the leader board system. The paper may also suggest ways to address these unethical practices and promote ethical behavior in the pursuit of high rankings on leader boards.

Unethical practices by leaders can refer to actions such as corruption, embezzlement, nepotism, lying, cheating, or abuse of power for personal gain. These practices undermine the trust and credibility of leaders, harm organizations and institutions, and negatively impact society. Moreover, they create an unfair playing field for others and often result in unequal distribution of resources and opportunities. Leaders have a significant impact on their constituents, and unethical behavior can erode the public's faith in leadership and the democratic process. It is important for leaders to act with integrity and hold themselves to high ethical standards in order to maintain a healthy and functioning society.

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Studies have shown that unethical leadership can have far-reaching and negative impacts on organizations, including decreased employee job satisfaction and commitment, decreased productivity, and increased turnover. In addition, unethical leadership can contribute to a negative work environment, leading to toxic cultures and decreased morale among employees.

Despite these negative outcomes, unethical leadership continues to be a prevalent issue in organizations. This can be due to a lack of accountability and enforcement of ethical standards, as well as the influence of situational and organizational factors, such as pressure to meet performance targets and cultural norms that tolerate unethical behavior.

There are varied areas in ethical parlance that include all aspects of business, administration, and management. Some of the areas where companies have noticed the wide range of unethical practices in business activities:

Financial Aspects: There have been multiple reports about number of companies including big tech giants involved in financial irregularities which include cooking of books of accounts, malicious entries, fake transactions, tax evasion, insider trading, over/undervaluation, bribery, etc.

Aspects Toward Customers: Every company across the globe is sustaining only from the revenue it is generating through its business activities. And customer/client be it an individual or company is the most significant pivot of this revenue generation because it is coming out of the pocket of such customer/client only. It is evident that numerous unethical practices are adopted by companies to cheat the customers over the period of time. It includes unreasonable use of fear tactics, malicious and hoax advertisements, breaching of customer's privacy by divulging confidential information such as selling of customer records, misrepresentation of facts, etc.

Aspects Toward Employees: Unethical behavior at work is a complex phenomenon that can manifest in a multitude of ways and can be driven by various motives. It can range from minor deviations from ethical standards to outright illegal activities. Regardless of the severity, such behavior can have far-reaching negative impacts on a broad range of stakeholders, including societies, organizations, colleagues, and the individuals themselves. It is important to recognize that the potential for unethical conduct is present in all individuals to some extent, and it can be influenced by various factors such as organizational culture, personal values, and situational factors. Therefore, promoting ethical behavior and creating a culture of integrity within the workplace is crucial to prevent and mitigate the negative consequences of unethical behavior.

It includes discrimination and harassment, toxic workplace culture, unethical leadership, unethical wage rules, abuse of workplace health and safety principles, etc.

Aspects Toward Society: Multinational firms conduct business in nations where corruption, sexual harassment, racial discrimination, and disregard for the environment are neither forbidden by law nor unusually unethical. The business must determine whether to follow unchanging ethical standards or to conform to regional laws in order to increase revenues. Numerous company and trade organizations have adopted ethical codes for organizations, managers, and employees due to the potential enormous costs of corporate and white-collar crime for both society and specific firms.

Leaders who make unethical decisions at a higher level may engage in actions such as covering up their wrongdoing, silencing dissent, manipulating information, and using their power to influence others to act in their favor. These actions can lead to further unethical behavior, corruption, and abuse of power, and can result in serious consequences for organizations, communities, and society as a whole. Leaders who engage in unethical practices can harm the reputation and integrity of their organization, leading to loss of public trust and confidence. In some cases, these actions can even result in legal penalties and criminal charges. It is important for leaders to uphold ethical standards and avoid engaging in unethical practices, even when the stakes are high and the pressure to succeed is intense.

The use of unethical practices to attain positions on leader boards has been widely reported and documented in various contexts such as online gaming, e-sports, and competitive sports. Previous research has shown that individuals who engage in unethical behavior do so to gain an advantage over their competitors, increase their standing on the leader board, and boost their self-esteem and reputation.

Studies have identified several types of unethical practices such as cheating, exploiting loopholes, and exploiting weaknesses in the system. These practices have been shown to have negative impacts on the fairness of competition and the overall integrity of the leader board system. They also have the potential to erode trust in the leader board system and discourage individuals from participating in competitions.

The Confederation of All India Traders (CAIT), a group representing more than 60 million small local businesses, accused the Indian banks of engaging in “unethical practices” in cooperation with the top most online selling platform Amazon and Flipkart by offering cash backs and incentives to customers who use particular credit or debit cards. In this regard, a letter was sent to Nirmala Sitharaman, the Minister of Finance, Govt of India.

According to CAIT, “the respective bank is not offering any cashback or incentives if the same goods are purchased from an offline market even by using the card of the same bank,” in its letter. “Such bank and company collusion prevents offline traders from conducting efficient commerce.”

These are just a few examples of unethical practices by leaders and the consequences that can result from such behavior.

- **Enron Scandal:** In 2001, leaders at Enron, an energy company, were found to have engaged in widespread accounting fraud and misleading financial reporting, leading to the company’s collapse and loss of thousands of jobs and pensions.

- Volkswagen Emissions Scandal: In 2015, Volkswagen admitted to using software to cheat on emissions tests, leading to widespread harm to the environment and a loss of public trust in the company.
- Cambridge Analytica Scandal: In 2018, leaders at Cambridge Analytica, a political consulting firm, were accused of using Facebook data to influence the outcome of elections, including the 2016 US Presidential Election.
- Goldman Sachs Abacus Case: In 2010, Goldman Sachs was charged with fraud for selling mortgage-backed securities without disclosing their poor quality to investors.
- Watergate Scandal: In the 1970s, leaders in the Nixon Administration were found to have engaged in a cover-up of a break-in at the Democratic National Committee headquarters, leading to the resignation of President Nixon.

These examples demonstrate that unethical practices by leaders can harm not only their organizations and the people they lead but also the broader society and the public trust in institutions. They underscore the importance of strong ethical leadership and the need for accountability when leaders engage in unethical behavior. Ultimately, these examples serve as cautionary tales and remind us of the importance of upholding ethical standards in leadership positions.

62.2 Objective of the Study

The major objective behind this research is to understand the ethical or unethical practices that are followed by various organizations to hold their stake in the industry. We specifically would like to focus on the Indian IT industry and the practices that are followed by organizations in this ecosystem to be market leaders, also, as to how the organizations are building their policies in order to give ethical competition to their competitors through the strategic decisions.

62.3 Review of Literature

The IT sector is frequently in the news due to a seemingly endless stream of ethical issues. With each new week, a new ethical dilemma is unearthed, highlighting the significant gap between the existing practices of “doing ethics” and people’s understanding of what it means to act ethically. Despite ongoing efforts within the tech industry to establish organizations and processes around digital ethics, numerous hard lessons have been learned about the difficulties in creating and adhering to ethical standards in the rapidly evolving world of technology. As such, it is clear that a great deal of work is still needed to bridge the divide between existing practices and the ethical expectations of society as a whole.

Nevertheless, the leadership journey includes several situations where they need to make possible decisions and run the enterprise. A bitter sometimes, yet ethical; under pressure sometimes, yet necessary; a quick sometimes, yet capturing decisions. Leadership intentions and communication competency reflect in leaders' decisions as a whole. Unethical and ethical leadership is secondary.

There have been many individuals and groups who have encountered unethical practices in society during the nineteenth, twentieth, and twenty-first centuries. Here are a few notable examples.

62.3.1 In Nineteenth Century

Frederick Douglass: An African-American abolitionist who spoke out against the unethical practice of slavery and advocated for equal rights and freedoms for all people.

Elizabeth Cady Stanton: A women's rights activist who fought for women's suffrage and the abolition of slavery, challenging the unethical practices of gender and racial discrimination.

62.3.2 In Twentieth Century

Mahatma Gandhi: An Indian independence leader who employed non-violent civil disobedience to protest against British colonial rule and fought for equal rights for all Indians, challenging the unethical practice of colonialism.

Martin Luther King Jr.: A civil rights leader who fought against racial segregation and discrimination in the USA and advocated for equal rights and justice for all Americans, challenging the unethical practice of racial inequality.

62.3.3 In Twenty-First Century

Greta Thunberg: A climate change activist who has brought global attention to the unethical practices of polluting industries and governments and has inspired a global youth movement to take action on climate change.

Black Lives Matter: A social movement that protests against police brutality and systemic racism against Black people and advocates for racial justice and equality, challenging the unethical practices of racial discrimination and inequality in the criminal justice system and broader society.

These are just a few examples of the many individuals and groups who have encountered and challenged unethical practices in society throughout history.

The reputation and image of a corporation can be damaged through unethical actions. If a business acts unethically, it could have to spend more money to boost its reputation and win back as many clients as it can. We looked at a variety of topics, including ethical issues and company employees, finances and its ethical issues in any organization, customers and their ethical issues, and finally, the society's ethical issues with regard to the IT industry as a whole, to find out. These people are known as "ethics owners." The key problem is balancing the need to respond to ethical crises under external criticism while still being accountable for the internal logic of the businesses and the sector. In order to support our argument regarding ethical behavior in the IT industry as a whole, a wide range of relevant reviews and researches studied to understand the variable understudy.

Martin et al. (2022) added their voices to the ongoing discussion about the ethics of the IT industry. The authors explored five overarching themes that have been at the center of the debate: the future of employment, personal identity and integrity, governance, and trust. What is especially noteworthy about their contribution is how they highlight the importance of continuing cross-disciplinary conversations in order to fully understand the ethical complexities presented by new information technologies. The authors suggest that engineers, legal theorists, philosophers, organizational behaviorists, and information scientists must work together in order to address these challenges and ensure that ethical considerations are properly integrated into the development, deployment, and management of information technology systems. This approach is crucial in order to create a more ethical and sustainable IT industry that aligns with society's values and expectations.

El-Halees (2011) studied the ethical issues in information technology among graduate students. They presented that new technologies often bring new ethical concerns. They highlighted four types of ethical issues, viz. intellectual property, data privacy, modeling and simulation and Internet research.

Mason (1995) worked upon ethical applications in information technology that illustrate a practical and intellectual basis for moving forward with the job of building a good society in the information era. The use of information technology in our lives, from business process re-engineering to building large-scale systems, is undoubtedly one of the most significant ethical challenges of our time. This article discusses the ethics of technologies like email.

Sargolzaei and Nikbakht (2017) assessed and graded ethical and social issues in the realm of information technology. According to the studies that have been done and the findings of this study, it can be said that ethics in information technology can be taught. For this reason, a set of tactics and training for preventing unethical behavior in the field of information technology have been provided in the hopes that their difficulties will be lessened.

Reynolds (2014) drew attention to the growing concern about the abuse of personal information and privacy violations within the IT industry. With the rapid expansion and development of the Internet, cutting-edge information systems have made it possible to collect, store, and access vast amounts of personal data. Unfortunately, this growing capability has also led to an increase in unethical and sometimes illegal activities related to the handling of personal information. The IT industry has been criticized for not doing enough to protect the privacy of individuals and for not implementing adequate security measures to prevent data breaches and cyber-attacks. This has resulted in serious consequences for both individuals and organizations, including financial loss, reputational damage, and legal consequences. As such, it is critical for the IT industry to take proactive measures to address these issues and ensure that ethical considerations are integrated into all aspects of information management.

Prior et al. (2002), in the ethical attitude of information system professionals, studied that there are no appreciable gender- or point-specific disparities in privacy indicating that everyone is concerned about privacy. This problem is also supported by the study's findings. The study does, of course, also demonstrate that female student is more concerned about privacy. Given their greater knowledge of the topic, IT professionals and computer and IT students are more inclined to respect privacy-related problems, which also pertain to individual training. It is necessary to correctly develop and implement IT strategies, infrastructures, and platforms before talking about the privacy of data access.

Boneau (1960) investigated to verify the validity of the findings using *T*-test. The study highlights the findings in relation to the study's primary goal, which was to address respondents' views toward ethical IT issues, sometimes referred to as ethical orientation.

Baase (2008) examined that despite practical uses, mobile cameras may compromise other people's privacy in public areas. The majority of mobile phones come with high-quality digital cameras, despite the fact that they have significantly altered modern existence. These cameras have the capacity to take pictures of people without their knowledge, infringe on their privacy, post those pictures online, and make them publicly accessible.

Peterson (2002) studies about the deviant workplace behavior and the organization's ethical climate where the findings support that the idea that people can be taught information technology ethics in order to affect them. Such a curriculum appears to be necessary to handle the ethical concerns of IT given that there is no required syllabus for students in bachelor's, master's, and Ph.D. courses in Iran on ethical issues in information technology. This assertion is also supported by prior investigations.

Charlesworth and Sewry (2002), in ethical issues in enabling information technologies addressed ethical problems that arise with information systems and how they are now addressed in official curriculum recommendations.

Spinello (1997), in their case study, ethics in information technology presents a variety of instances, such as the personal issues that computer specialists and young professionals face, as well as “boardroom” dilemmas that need executive judgments, new business policies, and public policy decision-making giving pupils a variety of viewpoints on the ethical challenges surrounding computers and information.

Sharma and Kishore, in ethical values of information technology pointed that IT reaches thousands of miles in a matter of seconds without taking geographic location into account. As a result, it is fairly typical for cunning individuals to use this technology for their own personal gain. This also discusses the issue of ethical conduct in the IT industry which has produced its own codes of ethics and professional conduct that can be used as a standard by both individuals and other businesses.

In addition, previous research has also shown that there are several factors that contribute to the prevalence of unethical practices, including individual characteristics such as competitiveness, social influence, and lack of accountability. Environmental factors, such as the design of the leader board system, the reward structure, and the enforcement of ethical standards, also play a role in shaping behavior.

The literature suggests that the issue of unethical practices in the pursuit of high rankings on leader boards is a complex and multifaceted problem that requires a comprehensive approach to address. Further research is needed to better understand the motivations and drivers of unethical behavior and to develop effective strategies to promote ethical behavior and maintain the integrity of the leader board system.

62.4 Research Methodology

A Likert scale questionnaire was developed to conduct a survey which collects the opinion of people on the above-stated areas pertaining with ethical issues in a company particularly IT sector. These respondents are working in various roles in IT industry in different companies on different roles. In response to the floated questionnaire, 72 respondents had casted their viewpoint over the issues stated. Further, we have also analyzed the impact on the market capital of the companies due to the unethical practices in each area when the issues surface and it comes into the light of public and certain measures that companies take to avoid these unethical practices have been discussed.

62.5 Procedure for Data Analysis

The survey is available for three days online before being processed with the IBM SPSS statistical analysis tool. The data will then be subjected to statistical tests based on its form (ordinal, nominal, and categorical data). Reliability, validity, factor analysis, and ANOVA test will be utilized. On all scale data, descriptive tests and frequencies of each question will be run, providing a picture of the “average” response

for each question. Frequencies will be utilized because they provide percentages, and when compared to other demographic questions, they can be used to estimate what percentage of a population thinks a certain way. This will be particularly beneficial to the demographics.

62.6 Assumptions

It is considered that the respondents took the survey of their own volition and that they accurately comprehended and interpreted all of the questions and information presented. It is presumed that each response was given honestly.

62.7 Analysis of the Objectives

Questionnaire was mailed to the respondents for one month to complete the survey on twenty items. 100 respondents were targeted to attain the response on leadership intentions parameters, and data was utilized for this investigation. 72 responses were found from the survey and taken for analysis.

62.8 Demographic Information

The demographics of the survey respondents are summarized as below.

In the gender difference aspect, men were represented more than women, making up 62.1% of the data. The age group 25–40 was the most common, accounting for 72.4% of all survey respondents. Employees were represented more than self-employed and unemployed, making up 83.9% of the data.

Regarding employment statuses across various sectors, prominently, 56.3% were associated with service-based industries, i.e., information technology and 27.6% in the various product-based companies, whereas a little percent inclusively with the rest of the population understudy was 17.1% across various startups, education industries, and consultancies.

62.9 Reliability and Validity of Survey

In a study of unethical practices to attain positions on leader boards, reliability and validity are important considerations to ensure that the results accurately reflect the phenomenon being studied. Reliability can be increased by using a consistent method

Table 62.1 SPSS output for reliability statistics

Case processing summary		
Cases	<i>N</i>	Percent (%)
Valid	72	100.0
Excluded	0	0.0
Total	72	100.0
Reliability statistics		
Cronbach's alpha	<i>N</i> of items	
0.97	20	

of data collection and analysis, while validity can be improved by carefully defining the research questions and using appropriate methods of data collection and analysis.

In order to enhance the reliability and validity of the study, it is recommended to use multiple sources of data, such as surveys, interviews, and observations, to triangulate the findings and increase the accuracy of the results. Additionally, it is important to consider the potential sources of bias and to take appropriate steps to minimize their impact on the results.

Reliability was calculated with the help of Cronbach's Alpha, and it is found to be **0.97 which means the questionnaire is consistent**. Similarly, validity can be calculated with the help of correlation matrix, and the significance for all the questions is less than **0.05 which means the questionnaire is accurate** (Table 62.1).

62.10 Descriptive Statistics

Below table summarizes the descriptive statistics of all the independent variables. The data contains mean values of all the 20 variables and observed that all the variables are having greater than which means the responses agree with the ethical issues play an important role in market capital of a firm.

Parameters	<i>N</i>	Mean	Std deviation	Minimum	Maximum
<i>Finance</i>					
Manipulating financial reporting	72	3.1	1.3	1	5
Manipulating time/expense information	72	3.15	1.36	1	5
Falsifying assets	72	2.94	1.27	1	5
Abusing confidential information	72	2.71	1.23	1	5
Insider trading	72	2.94	1.39	1	5
<i>Sales/advertising</i>					
False sales/marketing	72	2.99	1.36	1	5
False documents to customers	72	2.79	1.31	1	5

(continued)

(continued)

Parameters	<i>N</i>	Mean	Std deviation	Minimum	Maximum
Anti-competitive practices	72	2.92	1.24	1	5
Breaching customer privacy	72	2.92	1.36	1	5
Manipulating quality of a product	72	2.85	1.29	1	5
<i>Employees</i>					
Discriminating against employees	72	2.81	1.34	1	5
Overtime working	72	3.22	1.31	1	5
Violating workplace rules	72	3.06	1.31	1	5
Violating wage policy	72	2.96	1.42	1	5
Breaching employee policy	72	3.01	1.36	1	5
<i>Society</i>					
Falsifying charity contribution	72	2.71	1.18	1	5
Public safety to risk	72	2.71	1.19	1	5
Violating environmental standards	72	2.89	1.32	1	5
Violating human rights	72	2.76	1.27	1	5
Unlawful media practices	72	2.75	1.29	1	5

62.11 Data Exploration

Initial eigenvalues were considered up till 20 which are later reduced to up to 5 on the basis of principal component analysis (PCA) which is a method for avoiding information loss while boosting interpretability by lowering the dimensionality of such datasets (Table 62.2).

62.12 Hypothesis Test Analysis

H0: Unethical practices in each area do not have a significant impact on the market capital of the company.

H1: At least, few unethical practices in each area have a significant impact on the market capital of the company.

Table 62.2 Total variance explained

	Initial eigenvalues			Extraction sums of squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	21.50	63.9	63.9	21.50	63.9	63.9
2	2.35	7.0	70.9	2.35	7.0	70.9
3	1.83	5.4	76.3	1.83	5.4	76.3
4	1.51	4.5	80.8	1.51	4.5	80.8
5	1.19	3.5	84.4	1.19	3.5	84.4
6	0.87	2.6	87.0			
7	0.81	2.4	89.4			
8	0.55	1.6	91.0			
9	0.51	1.5	92.5			
10	0.41	1.2	93.8			
11	0.38	1.1	94.9			
12	0.34	1.0	95.9			
13	0.25	0.8	96.7			
14	0.24	0.7	97.4			
15	0.23	0.7	98.1			
16	0.21	0.6	98.7			
17	0.14	0.4	99.1			
18	0.13	0.4	99.5			
19	0.10	0.3	99.8			
20	0.08	0.2	100.0			

62.13 ANOVA Test and Its Findings

		ANOVA				
		Sum of squares	df	Mean square	F	Sig.
Fin	Between groups	34.21	1	34.21	39.44	0.000
	Within groups	60.72	70	0.87		
	Total	94.93	71			
Sales	Between groups	35.33	1	35.33	42.62	0.000
	Within groups	58.02	70	0.83		
	Total	93.35	71			

(continued)

(continued)

		ANOVA				
		Sum of squares	df	Mean square	F	Sig.
Emp	Between groups	43.49	1	43.49	54.49	0.000
	Within groups	55.87	70	0.80		
	Total	99.35	71			
Society	Between groups	36.94	1	36.94	53.29	0.000
	Within groups	48.52	70	0.69		
	Total	85.47	71			

Based on outcome of ANOVA test, we may infer the following outcomes:

Finance	F_cal > F_Tab (3.76)	Null hypothesis is rejected
Sales	F_cal > F_Tab (3.76)	Null hypothesis is rejected
Employees	F_cal > F_Tab (3.76)	Null hypothesis is rejected
Society	F_cal > F_Tab (3.76)	Null hypothesis is rejected

As per the ANOVA test performed in SPSS tool, we have got the results as per the table above.

62.14 Interpretations

The last column (Sig.) is the *p* value, which can be used to either reject or accept the null hypothesis. Here, we have tests with the significance level 0.05 (i.e., alpha = 0.05). Now, since Sig. our null hypothesis will be rejected. This states that alternative will be accepted, i.e., there is a relationship between independent and dependent variables.

We conclude that market capital is significantly dependent upon several unethical practices, few of which are more important than others.

62.15 Conclusion

During our study, we found various companies indulged in unethical corporate practices despite stated ethical code of conduct norms. But still, certain issues exist in the environment due to deliberate acts performed by the key employees of the organization which comes under the purview of unethical conducts which also clearly violates the stated code of conduct adopted by these companies. We have seen the classic example of Satyam fiasco which signifies broad level of corporate governance failure from its top most office where Mr. Ramalingam Raju, the then CEO of Satyam Computers, was involved in fudging the records. Ironically, couple of months back before this issue came into light, he was a recipient of Global Peacock Award for Corporate Governance. Satyam had lost as much as Rs. 10,000 crore in market capitalization in a single trading session as the stock dropped to an all-time low just after the news came out. After the management exposed irregularities in the accounting techniques, Satyam saw a significant value erosion and plummeted by almost 80%.

In another case, a whistle blower group called Ethical Employees purportedly protested to the Securities and Exchange Commission (SEC) of the USA and the board of directors of Infosys that CEO Salil Parekh was engaging in “unethical tactics” to increase short-term sales and profit and trying to boost profit via unfair means. Following concerns from insiders, Infosys’ market cap declined by \$6.6 billion.

Similarly, Tata Consultancy Services, the largest provider of IT services in India, was in serious danger after being served with an intellectual property lawsuit. A \$140 million fine was planned to be imposed on the business for allegedly stealing trade secrets and violations of intellectual property right issues.

To address the issue of unethical leadership, organizations can implement measures such as codes of ethics, whistleblower protection, and leadership training programs that emphasize ethical behavior. In addition, leaders themselves must take personal responsibility for their actions and strive to uphold ethical standards, even in the face of pressure to perform or succeed.

In conclusion, unethical leadership is a critical issue that demands attention from organizations and leaders. By promoting ethical behavior and holding leaders accountable for their actions, organizations can create positive cultures and minimize the negative impacts of unethical leadership.

Annexure: Questionnaire

7. Do you think an organization follows unethical practices in finance aspect by *

Mark only one oval per row.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Manipulating financial reporting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Manipulating time/expense information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Falsifying Assets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Abusing Confidential Information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Insider Trading	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. Do you think an organization follows unethical practices in sales/marketing aspect by *

Mark only one oval per row.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
False sales/marketing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
False documents to customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anti-competitive practices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Breaching customer privacy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Manipulating quality of a product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. Do you think an organization follows unethical practices towards employees aspect by *

Mark only one oval per row.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Discriminating against employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overtime working	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Violating workplace rules	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Violating wage policy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Breaching employee policy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. Do you think an organization follows unethical practices towards society by *

Mark only one oval per row.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Falsifying charity contribution	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public safety to risk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Violating environmental standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Violating human rights	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unlawful media practices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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