A NEW DIGITAL PERSPECTIVE TO EMPLOYEE VOICE: ACHIEVING INNOVATION WORK BEHAVIOR THROUGH A MODERATION AND MEDIATION LENS OF, AMBIDEXTERITY, INVOLVEMENT AND AGILITY

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THESIS ACCEPTANCE CERTIFICATE

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Abstract

At a time of technological breakthroughs, organizations are striving hard to innovate and employees are constantly finding ways to contribute their ideas and be heard in their organizations. Organizations striving to keep up with the evolving trends are looking towards their employees to contribute to the innovation process, however their lack of trust and ambiguity towards employee voice is still at large. Many organizations to date consider it as a tool for causing disruptions to peace and the routine hierarchal structures of the organizations. While organizations try to stray away from employee voice, the emergence of social media has erupted as a new forum for these employees to not only voice their concerns but as means for being heard and acknowledged by organizational members. This has created many problems for the management and challenging them to create digital tools that support employee voice, that will eventually lead to innovation processes and facilitate idea generation. Hence there is a particular need to research on whether digital employee voice leads to positive outcomes and behaviors or not. Therefore, this current study seeks to examine the impact of digitally-enabled employee voice on employee ambidexterity, employee involvement, and innovative work behavior. It simultaneously concentrates to analyze both employee ambidexterity and involvement as mediators, while organizational agility takes the role of a moderator. Moreover, this study also employs support from self-determination theory (SDT). Data has been collected from 222 managerial employees working in the telecommunication sector of Pakistan using self-administered questionnaires. Results of the study demonstrated that digitally-enabled employee voice had a positive relationship with employee ambidexterity and employee involvement. However, it failed to have an influence on their innovative work behavior. Moreover, both employee ambidexterity and employee involvement were seen to have a significant impact on innovative work behavior. Likewise, both of them proved to be successful mediators in the relationship between digitally-enabled employee voice and innovative work behavior. Findings also revealed that, organizational agility did not moderate the relationship between employee ambidexterity and employee involvement with innovative work behavior. Further, this research contributes to the growing literature of digitally-enabled employee voice and the positive impact of having digital spaces within the workplace to support employees' voice. Moreover, it suggests a range of practical implications from the results of the study and opens numerous research avenues for future researchers in different sectors and countries to enhance the generalization of the study and further add to the literature of the variables.

Keywords: *Digitally-Enabled Employee Voice, Employee Ambidexterity, Employee Involvement, Innovative Work Behavior, Organizational Agility, Pakistan*

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CHAPTER No. 1

1 Introduction

1.1 Introduction and Background of Study

The rise of technology has rendered business markets more unpredictable and volatile in recent years, influencing every organization regardless of size or power (Campos-Blázquez et al., 2023). Abundance of businesses were seen to have fallen behind the technology train and were faced with dire consequences in developing ways to cope with the changing economic conditions and find ways to sustain competitive advantage through enhanced innovation potentiation (Ardito et al., 2021; Azevedo et al., 2021). While the global pandemic resulted in an overnight adoption of digital transformation and technology in the workplace (Lim, 2021), compelling

organizations to consistently improve the effectiveness of their current business models and seek strategies to adapt to shifting market dynamics (Clauss et al., 2021) is still an ongoing challenge.

There is no surprise that digitalization is shaping the future of the companies, and its employees, bringing about implications for future work practices and working circumstances (Kumar et al., 2023; Skare & Soriano, 2021; Verhoef et al., 2021). The nature of work, processes and practices and employee relations are only some of the aspects that have been affected by the new digital advancements in technology (Bamel et al., 2022; Malhotra, 2021; Santana & Cobo, 2020). This new digitally induced market now requires organizations and its employees to have the skill set and flexibility to acclimate to these changes (Maran et al., 2022). Moreover, with continuous developments in technology and consumer preferences, employees are being used as an asset directly involved in the job, as an important repository of information, suggestions, and ideas for improving and innovating organizational operations (Doshi & Nigam, 2023). Likewise, in recent years, there has been a momentous increase in the usage of artificial intelligence and other digital platforms to improve employee experience of HR procedures and engagement at work (Malik et al., 2022). This has prompted many organizations to innovate, and they are now looking to their employees to participate in this process as well (Azevedo et al., 2021).

The pandemic ushered in a new era of technological developments that allowed for a more employee-centric approach to things while also digitizing the interaction between firms and their employees (Carroll & Conboy, 2020; Gkinko & Elbanna, 2023; Iansiti & Richards, 2020). Henceforth, the new mechanisms in companies now provides employees with a voice in matters of importance and decision-making (Scully-Russ & Torraco, 2020). However, these swiftly shifting environments have also resulted in increased challenges that employees encounter on a daily basis (Chaudhry et al., 2022). As a result, voice is seen as a vital component in order to enhance HR practices that effect employee satisfaction, well-being, and engagement, as well as providing an outlet for innovation (Alves et al., 2023).

Employee voice is a critical source of future-oriented feedback and innovation for such firms that are constantly striving for growth and advancement (Kim & Leach, 2020). The current advancements in ICT and AI have created numerous opportunities for building digital employee

voice, particularly with the increasing popularity of digital voice channels like social media (Ellmer & Reichel, 2021). Undoubtedly, voice is an indispensable tool for organizations to increase efficiency, executives to understand the dynamics of emerging markets, and employees to attain high performance (Li et al., 2023). Failing to acknowledge voice in today's era can be seen to have numerous consequences for organizations and it presents them a myriad of ideas and views that can be used for improvements in functions and organization at large (Singh & Vanka, 2019).

In this day and age, employees' voices are no more at the mercy or control of organizations, and employees are now easily assisted by digital technology to vent their grievances and be heard in some form (Korzynski et al., 2020). Traditional avenues of employee voice, such as surveys, suggestion boxes, and one-on-one meetings, have long been phased out (Alamsyah & Ginting, 2018). Employee voice has developed with the passage of time, social and technical advances, and is now considered "elastic" rather than a stagnant process (Ghani & Malik, 2022b; Silverman et al., 2013).

Through electronic tools like as social media, new forms and channels of employee voice have emerged (Bernauer & Kornau, 2022; Madsen, 2017). Social media has evolved into a significant tool for improving workplace internal communication and cross-functional collaboration (Young & Hinesly, 2014). In this light, social media has been viewed as both a threat and an opportunity in recent years. The risk exists because social media communication is not a one-way street, but rather open, complex, and uncontrolled (Amazeen et al., 2019). Apart from social media, several other rising websites and forums have emerged to allow employees' voices to be heard (Miles & Mangold, 2014). As a result, recent scholars have begun to focus more on the digital revolution and its impact on employee voice (Jebsen et al., 2022).

Organizations with actively involved employees are said to be more long-lasting and sustainable (Um-e-Rubbab & Naqvi, 2020). Likewise, surviving in today's challenging economy is what is incessantly driving firms to innovate and find a balance between exploring new ideas and exploiting existing competences in an effort to satisfy existing customers as well as having a futuristic approach towards changes in emerging markets (Caniëls & Veld, 2019; Shamim et al.,

2020). Furthermore, organizations must constantly change and adapt to the volatile market dynamics and competitive characteristics of businesses during a technological downpour. This demands the need for businesses to become more agile, allowing them to adapt to changes more efficiently and effectively, as well as exploiting their resources and the dynamic and shifting market as sources of opportunities for improved performance (Awwad et al., 2022; Eilers et al., 2022; Marjerison et al., 2022). However, the research on e-voice is still dawning, and hence the paucity of studies on the benefits of new technologies being included in voice behavior opens up future research pathways with high potency (Bernauer & Kornau, 2022). In order to further accentuate our understanding on the concept of e-voice in the workplace, our research intends to explore the positive employee outcomes and behaviors generated through the use of digitally-enabled employee voice such as employee ambidexterity, employee involvement and innovative work behaviors, while simultaneously investigating how the presence of organizational agility impacts those certain relationships.

1.2 Problem Statement

Digitalization has had a profound and revolutionary impact on the life's of people (Akkaya & Tabak, 2020) and is burgeoning with an accelerated surge in the workplace (Bamel et al., 2022). However, a number of major businesses were founded in a pre-digital period; hence, implementing a digital overhaul for these successful corporations is still challenging, as many still regard digital applications such as digital voice as a threat rather than an opportunity (Afridi et al., 2023; Sebastian et al., 2020). Likewise, the embracement of technology also opened itself to the multitudes of inequalities in the human resource departments including that in employee voice itself (Butterick & Charlwood, 2021; Machokoto & Dzvimbo, 2021). Moreover, having transcended into an era of globalization and the ever-changing nature of technological evolutions, has created a competitive business environment that requires organizations to continuously develop and innovate (Farzaneh et al., 2022) but these developments still require a balance that aligns with the recent increase in HR practices that result in efficacious employee performance (Tampi et al., 2022).

These new technological breakthroughs also bring about a call for innovation and expectations on employees to participate towards innovative processes and for organizations to establish

systems that both support and encourage employee voice (Azevedo et al., 2021; Bernauer & Kornau, 2022). However, while individual employees are widely acknowledged to be critical for innovation and competitive organizational development given that they can search the outside world for potentially useful ideas, finding ways to bring their ideas forward for development and implementation still remains an on-going issue (Avby, 2022; Rangus & Slavec, 2017a).

Furthermore, as essential employee voice is, it is not always present in organizations (Hatipoglu & Inelmen, 2018; Prouska & Psychogios, 2018) and advocating for new ideas or expressing concerns is still seen as disruptive and threatening to the already established harmonious routines and hierarchical structures of the organizations (Röllmann et al., 2021). The tale of Nokia's demise is considered as a fantastic example of how important employee voice is. The silence of employees owing to fear of top-level executives led to Nokia's disintegration in the smartphone industry, demonstrating once again the crucial importance of voice behaviors for businesses' long-term sustainability and innovative growth (Li et al., 2023; Vuori & Huy, 2016).

However, despite the absence of voice in organizations, rapid technological evolutions now have started to change the course of traditional voice structures and have presented employees with unparalleled power both from outside and within organizations, especially since social media has emerged as a new form of voice (Holland et al., 2019). Many employees now use social media to their advantage and take it as an opportunity to ‘be heard’ by others (Bhatti et al., 2020). This has posed numerous challenges for management. First they are confronted with the task of providing employees with the right digital tools within the company lines, that will facilitate their innovative capabilities and idea generation, as well as aid in the selection and recognition processes of ideas produced by employees (Opland et al., 2022). Second, they have to analyze how providing employees with digital platforms for voice might lead to positive employee behaviors and outcomes as well as rethinking the value of employee perceptions in their businesses (Xia et al., 2020).

Similarly, there has been a scarcity of research on employee voice in developing countries, including Pakistan (Aslam & Akhtar, 2023). It should come as no surprise that the telecommunications industry is at the pinnacle of digitalization, enabling digital connectivity to

all other industries (Bhanbhro et al., 2021). However, there is competition within the telecommunications sector, with significant pressure to produce innovative goods (Dahal, 2022; Farid et al., 2022). These telecom businesses are now challenged to find ways to implement these advances while also becoming more receptive to the idea of letting employees take part in this process (Din et al., 2016; Soomro et al., 2020).

1.3 Research Gaps

Many recent academics have advocated for a reevaluation of HR practices infused in this new technologically enhanced era, pointing at the range of notions that link IT and HRM practices together even if research on digitally-focused HR practices is still in its early phases (Bresciani et al., 2021; Malik et al., 2022; Prikshat et al., 2023). Furthermore, with contemporary literature expanding on the themes of human resource development and organizational learning, employee voice has remained mostly underrepresented from those studies (Jha et al., 2019). The proactive behavior of employee voice that results in positive changes has prompted the need to investigate the construct's benefits on an individual level, with a focus on garnering insight of the conditions under which voices are expressed through digital tools, contributing to our currently limited knowledge of e-voice (Bernauer & Kornau, 2022; Prouska & Psychogios, 2018; Röllmann et al., 2021; Weiss & Zacher, 2022). Likewise, there has been growing interest in the mechanisms through which such proactive behaviors induce innovative performance (Bilal et al., 2021).

In line with this, Ellmer and Reichel's (2021) study calls for further research into the relationship between voice behavior and voice outcomes reported by employees, so that we can better understand the characteristics of a digital voice and its perceived outcomes at an employee level. Prior literature may have assessed the impact of employee voice on outcomes such as innovation (Della Torre et al., 2021) however, little is known about the state of employee voice in Asian Pacific areas because most previous employee voice research has been undertaken in 'western' cultures (Prouska et al., 2022; Wilkinson et al., 2020). Moreover, in their research Rahmani et al. (2023) also noted how to date there has been no study which has conclusively revealed whether or not a digital environment is a more favorable when it comes to expressing opinions and suggestions compared to in-person environments. Thereby, opening new research avenues to further explore the outcomes of digitally-enabled employee voice.

Likewise, previous research has called for a more concentrated investigation of employee ambidexterity and its antecedents (Chang et al., 2019; Kaygan et al., 2023). Taking into context the importance of individual ambidexterity and how difficult it is to achieve, further development in research (Salas-Vallina et al., 2019) and examination of how it can be fostered is required (Folger et al., 2022). Nonetheless, there is a scarcity of research on the construct, and such limitations have called for more scholarly evidence of individual ambidexterity in real-world contexts and its implications for HRM practices (McPhee & Schlosser, 2022; Swart et al., 2019). In addition to that we have a limited grasp of how individual employees' ambidextrous characteristics such as their capacity to explore and exploit, affect their performance, nevertheless, current research in the field has prompted scholars to investigate these individuals' abilities (Schnellbächer et al., 2019; Tempelaar & Rosenkranz, 2019). Additionally, the lack of knowledge about how ambidexterity affects innovation is another shortcoming in the existing research (Caniëls & Veld, 2019). In a similar context, while there has been discussion on the relationship between ambidexterity and innovative performance, there have been only a few who have explored the relationship and the resources required to achieve it (Kumalaningrum et al., 2023). On top of that, most of research that links ambidexterity with innovation and other HR practices has mostly been done in the context of developed countries (Ahammad et al., 2015; Prieto & Santana, 2012; Rao-Nicholson et al., 2020), hence an absence of research in developing countries such as Pakistan poses as a significant research gap.

There has also been a call for research on individual level antecedents of employees innovative work behavior (Afsar et al., 2021). Furthermore, given that agility provides organizations with the ability to proactively predict and adapt to developments in today's volatile environment (Ahmed et al., 2022), there is a rather large debate on the meaning of the construct (Attar & Abdul-Kareem, 2020; Franco & Landini, 2022), and ambivalence regarding the concept in the research literature (Walter, 2021). Effectively establishing organizational agility remains an elusive goal for many organizations today (Joiner, 2019; Zhang et al., 2022). However, recent studies have yielded promising future research avenues and have called to rectify gaps in the linkages between digitalization and agility (Ciampi et al., 2022). Furthermore, to the best of our knowledge, there is limited study on organizational agility as a moderating variable

(Darvishmotevali et al., 2020), as it has usually been used as a mediator in most studies (AlNuaimi et al., 2022; Wamba, 2022), thereby leaving a gap in the literature.

1.4 Contextual Analysis

Traditional business models have never been the same since the advent of technology and digitalization in the workplace, posing a number of challenges for both management and, in particular, HR functions, which are now tasked with developing strategies to become flexible, implement processes aimed at fostering adaptability, and capitalize on the opportunities generated by the contemporary digital era (Akhtar et al., 2019; Bester & Stander, 2021). According to Mordor Intelligence Research & Advisory's (2023), analysis on the telecommunications sector, Pakistan is in the midst of entering the era of artificial intelligence. The pandemic's commencement has been crucial in promoting the widespread adoption of digitalization in the telecom industry, which has now become a vital engine of the nation's economy. Furthermore, according to the report, this digital revolution will be important in determining the future of the telecoms sector and establishing the way for future development. According to the Economic Survey of Pakistan (2023), the telecommunications sector in Pakistan grew by 6.6 percent in 2022, making it one of the nation's most rapidly expanding and promising sectors, committed to establishing a culture that fosters innovation, digital transformation, and entrepreneurship.

To keep up with the growing demand, telecommunication companies are under enormous pressure to produce innovative products more swiftly (Dahal, 2022). Innovation, however, cannot happen on its own, so it focuses on the employees who are seen as the fundamental elements and key stakeholders in the organization's goal to innovate and grow and this can only happen when organizations develop tools and procedures to allow idea generation and creation (Din et al., 2016; Welbeck et al., 2020). This highlights the importance of digital employee voice in the telecommunication industry, which will not only help these organizations solve their preexisting problems by making adjustments and but would also make them prosperous by fostering innovation (Soomro et al., 2020).

While there has been previous research conducted on employee voice in Pakistan, there are no studies which highlight the use of digital voice channels in promoting innovative behaviors in the telecommunication sector, opening up a potentially significant research avenue. Therefore, this research is concentrated on the telecommunication sector of Pakistan

1.5 Significance of the Study

The following study provides a more nuanced insight into how the conceptualization of employee voice has changed in tandem with recent technological developments (Ghani & Malik, 2022b), bringing to light the concept of digital voice and contributing to its scarce literature. It takes into account the recent emphasis on digitalized exchanges between firms and employees, and thus provides companies with a profound understanding of the benefits of digital voice channels, contributing firstly, to the limited understanding of how such exchanges promote employee-based value creation in the existing technology-dominated era (Boukis & Kabadayi, 2020) and secondly, to the intellections employers and organizations have of voice as a cause of disruption. Moreover, there have been only few studies that have researched on the impact of employee's voice behavior on their own subsequent behaviors (Chen et al., 2020).

In a similar vein, many recent scholars have emphasized the importance of HRM in a digital context, and have proposed several concepts linking the two (Prikshat et al., 2023). As a result, the study significantly contributes to the sparse literature by addressing the positive outcomes of digital employee voice in the workplace. Moreover, as Rahmani et al. (2023), acknowledged in their research that there has yet to be a study that establishes whether having online (digital) contexts are more favorable to voice one's concerns and suggestions than in-person situations. Taking this into consideration, this research investigates whether having a digital space for employee voice is beneficial in producing positive outcomes or not.

Furthermore, it contributes to the literature on voice and ambidexterity while simultaneously addressing numerous gaps by departing from the prior plethora of studies conducted on an organizational level (Bhatti et al., 2020) and carrying out the complete research on an individual employee level. Similarly, the study tackles a critical gap identified by Townsend et al. (2022) who noted a lack of understanding of the patterns between the process of when voice is initiated

and when it leads to an outcome, as well as the journey that occurs between those processes. As a consequence, in our study, we have used two mediators as an approach to better understand the journey and relationship of digitally-enabled employee voice to its outcome, innovative behavior (Chen et al., 2020) and organizational agility as a moderator, which further added to the literature's scarcity of the construct as a moderating variable.

Moreover, this study has the potential to notably expand our understanding of the transformational impact of technology on HRM practices (Myllymäki, 2021) and how practitioners and scholars alike can benefit from it by understanding the critical nature and ability of digital technologies to transform industries of a developing country, which can lead to not only innovative ideas but also the development of new solutions and business models to deal with potential threats from new market entrants (Clauss et al., 2021; Opland et al., 2022). Lastly, the underpinning theory of this research is self-determination theory, which is used to explain the motivation and occurrence behind employee behaviors (Zhao et al., 2023).

1.6 Research Aim

To address the above mentioned gaps in the literature, this study took a multifaceted approach, aiming to first investigate the relationship of digitally-enabled employee voice with employee ambidexterity, employee involvement and innovative work behavior. Second, it seeks to comprehend the role of mediators in examining the relationship between voice and innovative work behavior, and third, it aims to ascertain if having organizational agility as a moderator alters the nature of ambidexterity and involvement towards its intended outcome.

1.7 Research Objectives

i. To analyze the impact of digitally enabled employee voice on employee ambidexterity, employee involvement and innovative work behavior.
ii. To examine the role of employee ambidexterity and employee involvement on innovative work behavior
iii. To assess the mediating roles of employee ambidexterity and employee involvement between digitally enabled employee voice and innovative work behavior.

iv. To evaluate the moderating role of organizational agility on the relationship of employee ambidexterity and employee involvement with innovative work behavior.

1.8 Research Questions

i. Does digitally enabled employee voice have a significant relationship with employee ambidexterity, employee involvement and innovative work behavior?
ii. Does employee ambidexterity and employee involvement have a positive impact on innovative work behavior?
iii. Do employee ambidexterity and employee involvement mediate the relationship between digitally enabled employee voice and innovative work behavior.
iv. Does organizational agility moderate the relationship of employee ambidexterity and employee involvement with innovative work behavior?

1.9 Operational Definitions of Variables

Table 1 depicts how the variables have been defined in the following research.

Table 1: Operational Definitions of Variables

Digitally-Enabled Employee Voice	"Digitally facilitated processes, structures, or techniques that allow employees to speak up in their organization and potentially influence organizational affairs regarding issues that affect their job"	(Ellmer & Reichel, 2021; Martin et al., 2015; Townsend et al., 2022)
Employee Ambidexterity	"the ability to combine the exploration of new opportunities and the exploitation of existing capabilities over time"	(Schnellbächer et al., 2019)
	Explorative Behavior: "searching for, discovering, creating, and experimenting with new opportunities" **Exploitative Behavior**: "selecting, implementing, improving and refining existing certainties"	(Mom et al., 2007)
Employee Involvement	"identification with the job and psychological predisposition to seek some expression of the self at work"	(Maamari & Osta, 2021)
Innovative Work Behavior	"the initiation, development, realization and implementation of a novel idea that can improve a	(Afsar et al., 2021)

	product, service, process, and work method"	
Organizational Agility	"an organization-wide capability to proactively and relentlessly anticipate, respond, react and capture unique market opportunities in the quest to thrive and innovate in this current unpredictable, volatile and global competitive business environment"	(Attar & Abdul-Kareem, 2020; Cheng et al., 2020)

1.10 Chapter Summary

This chapter serves as an introduction to the forthcoming research. It begins with an introduction to the notion of workplace digitalization and the importance of embracing digitalization in HR practices such as employee voice. It then moves on to the study's problem area and research gaps. Furthermore, it includes a comprehensive overview of the research's significance as well as what this study aims to achieve. Finally, it outlines the study's research questions and objectives.

CHAPTER No. 2

2 Literature Review

2.1 Introduction

This chapter starts with the background of each construct, discussing their origins and the different definitions and the previous research conducted on them. It sheds light on the underpinning theory being used in the research and displays the operational definitions of the variables utilized in the current study. It then proceeds to build up the literature and develop

relationships to support the claimed hypotheses. It ends with the theoretical framework to better explain the hypothesized model.

2.2 Background

2.2.1 Digitally-enabled employee voice

The concept of employee voice has been gaining a lot of momentum in the current work environment (Singh & Vanka, 2019). Organizations are in constant need of employees input and opinions to develop new products, improve efficiency and to remain competitive in the market (Şimşek & Gürler, 2019). While the actual research on employee voice started in the 1990s when Van Dyne and Lepine defined it as promotive behavior that is used to address constructive challenges in order to improve the way things are done in organizations (Van Dyne & LePine, 1998). However, the concept of employee voice has long been available before that. History links employee voice back to the era of the industrial revolution, through the work of Karl Marx and Adam Smith (Kaufman, 2015) however, the research available on employee voice now is mostly an extension of the work done by industrial relations scholar Albert Hirschman, who in his book "Exit, Voice, and Loyalty" viewed voice as the human tendency to express their discontent (Hirschman, 1970). The construct however gained popularity in literature in the 1980s following the work of Freeman and Medoff who associated voice with union membership and collective bargaining (Freeman & Medoff, 1984; Jha et al., 2019; Wilkinson, Donaghey, et al., 2020). Since then there have been multiple researchers who have gone to explore employee voice, each defining it in their own context and in multiple fields such as industrial and employee relations, human resource management, organizational behavior and even organizational justice (Doshi & Nigam, 2023; Morrison, 2011; Şimşek & Gürler, 2019).

For example, in their study Lucas et al. (2006) defined employee voice as an employee's capacity to contribute to decision making. It was described as a tool for constructive interaction between employer and employee in order to promote the organization's long-term viability and workers' economic wellbeing (Emelifeonwu & Valk, 2018; Wilkinson & Barry, 2016). Similarly, Morrison defined voice as "the informal and discretionary communication by an employee of

ideas, suggestions, concerns, information about problems or opinions about work-related issues to persons who might be able to take appropriate action" (2014, p. 174). Voice has also been termed as the means through which employees can express their thoughts and ideas to their employer, allowing them to raise concerns over work related issues and increasing their participation in the workplace (S. Singh & Vanka, 2019). Maynes and Podsakoff (2014) also defined employee voice in their study as "the voluntary expression of ideas, information, or opinions focused on effecting organizationally functional change to the work context" (p. 92).

Furthermore, employee voice has been viewed in literature as a critical factor that can improve organizational efficiency, promote high-performance work systems, increase engagement and employee performance, so that organizations can innovate and remain competitive in the market (Almeida et al., 2020; Ghani & Malik, 2022b; S. Li et al., 2023; Weiss & Morrison, 2019). Employee voice has also leads to positive outcomes such as employee engagement (Holland et al., 2017; Rees et al., 2013; Ruck et al., 2017; Singh & Vanka, 2019), employee job performance (Song et al., 2019), and job satisfaction (Alfayad & Arif, 2017; Holland et al., 2011; Liang & Yeh, 2019; Lin et al., 2020; Nawakitphaitoon & Zhang, 2021). In the research by Van Gramberg et al. (2020) employee voice seen to reduce employees intention to quit and had help with dispute resolution. Thus employees are seen as a resource for companies that utilize information and make high quality suggestions for improvement of practices and organizational success (Doshi & Nigam, 2023; Y. Li & Sun, 2015).

Current technological transformations and the inclusiveness of ICT has paved the way for the establishment of digital employee voice. Employee voice that is digitally enabled is described as digitally facilitated processes, structures, or techniques that allow employees to speak up in their organization and potentially influence organizational affairs regarding issues that affect their job (Ellmer & Reichel, 2021; Martin et al., 2015; Townsend et al., 2022).

In their research Madsen (2017), focused on the role of introducing internal social media into organizations as a facilitator of coworker communication. Using social media as a digital tool for employee voice, they described it as a "user-friendly and visible web-based communication arena inside an organization in which coworkers and managers can communicate, interact,

connect, and make sense of their work and organizational life" (2017, p. 3). Social media has evolved from a passing fad to the most important challenge for communications professionals in the twenty-first century (Dreher, 2014). It has evolved into an effective tool that influences how information is shared and has elevated employee expectations about how their views should be heard in organizations (Ghani & Malik, 2022a). Similarly, research on employee voice reveal that social media serves as an outlet for employees' feelings, which not only reflect the organization's activities but may also act as a catalyst for changes in the organization (Tumasjan, 2023).

Organizations have used numerous media channels in recent years, such as social networking services (SNS), video sharing, blogs, internal communication, and so on, however, social media is not a reliable and consistent communication route (Ghani & Malik, 2022a). Aside from the numerous digital voice channels, websites such as Indeed.com, AboutMyJob.com and Best-Places-to-Work, among others, have emerged to allow employees' views to be heard (Miles & Mangold, 2014).

The previous, more conventional methods for obtaining employee voice included one-on-one meetings, suggestion boxes, tick boxes, and surveys with a Likert scale. Nevertheless, these methods had numerous drawbacks and were unable to fully engage employees or allow them to participate actively in the organization and reach their full potential (Alamsyah & Ginting, 2018; Ghani & Malik, 2022a; Walker, 2020). Having digital tools for employee voice, on the other hand, was viewed to build trust between employees and employers (Abdulgalimov et al., 2023). While research on digitally-enabled employee voice is limited, the use of external social media as a source for employee voice extends beyond social networking sites such as Facebook, Twitter, and LinkedIn, and includes messaging platforms such as WhatsApp and video platforms such as Skype (Khan et al., 2023; McCay-Peet & Quan-Haase, 2018; Sugimoto et al., 2017). Others, such as internal social media hosts, include workplace by Facebook and MS Teams (Khan et al., 2023).. Some organizations, on the other hand, use Enterprise Social Networks (ESNs) in particular to foster a secure work environment where employees may effectively communicate, work together and develop a sense of collaboration and new knowledge using modern digital tools like Yammer and Slack (Abdulgalimov, 2022).

The current studies available on the impact of digitalization on employee voice mainly deals with the use of social media at work to voice out employee concerns and how management may use social media to engage with their employees (Jebsen et al., 2022; Martin et al., 2015). Holland et al (2016) in their earlier research used social media as a form of digitally-enabled employee voice where it was seen to have an influence on the job satisfaction of generation Y employees. Work by Barnes et al. (2019) provided a deep analysis on the development of e-voice, and how employees' voice within trade unions were being affected by the use of social media. More recently, Holland et al. (2019) in their research discussed the concept of social media as a new form of employee voice. Other researches such as the work done by Abdulgalimov et al. (2020) showcases how developing digital systems for employee voice creates an environment of trust and facilitates constructive discussions and ideas for the workplace. Kim and Leach (2020) are one of the few researchers who directly used the term "digitally-enabled employee voice", however their study utilized the construct from an anonymous perspective. In addition to that, Mao and DeAndrea (2019) examined the safety and efficacy perceptions employees have in relation to digital voice channels. Their research discovered that when employees stayed anonymous and just a small number of individuals heard their comments, they felt more protected and had higher efficacy perceptions of a voicing channel.

While the research on digitally-enabled employee voice is still dawning, digital technologies are rapidly emerging in many aspects of the digital workplace globally. This has beseeched researchers to carry out in-depth investigations to examine how evolving digital technologies impact employee voice and how individuals interact and communicate with each other at work (Ghani & Malik, 2022a).

2.2.2 Employee Ambidexterity

The term 'ambidexterity' was first used by Duncan (1976) in order to explain how organizations need to bring about change while simultaneously conducting their business. Over the years, due to its significance in the business world, it has garnered the attention of both practitioners and scholars, more specifically at an organizational level (Chermack et al., 2010; Christofi et al., 2021; Mu et al., 2022; Salas-Vallina et al., 2019). However, Gibson and Birkinshaw (2004), in

their research were amongst the first scholars to bring into light the importance of individual ambidexterity, as organizational ambidexterity itself depends on the behaviors of individual employees. From there the interest in individual level ambidexterity began with scholars such as O'Reilly and Tushman (2004) explored it from the perspective of strategic management while Mathieu et al. (2006) determined the drivers of individual ambidexterity. Other significant contributors to the individual ambidexterity research are Mom et al. (2007, 2009) and Bonesso et al.(2014).

Mom et al. (2007) defines individual ambidexterity as a combination of exploration that involves individuals "searching for, discovering, creating, and experimenting with new opportunities" and exploitation that is "selecting, implementing, improving and refining existing certainties" (Mom et al., 2007, p. 910). While Laureiro-Martínez et al. (2010) in their research described exploration as a behavior that entails looking for alternatives for current tasks while exploitation was described as the behavior that is used to enhance task performance. In a similar manner both Turner et al. (2013) and Löwik et al. (2016) has similar meanings for ambidexterity that defined it as the refinement of current knowledge while simultaneously working to overcome deficiencies through attaining new knowledge and skills i.e. exploitation and exploration. It has also been referred to as "the capability of individuals to perform contradictory activities and switch between different mindsets and action sets" (Bledow et al., 2009, p. 322). In a more recent setting, Rosing and Zacher defined exploration at the individual level as "behaviors related to experimentation, searching for alternative ways to accomplish a task, and learning from errors" and exploitation as "relying on previous experience, putting things into action, and incrementally improving well-learned actions" (Rosing & Zacher, 2017, pp. 695–696). Despite the numerous definitions, the main concept is that ambidexterity is the ability of individuals to pursue both exploitative and explorative activities simultaneously (Rogan & Mors, 2014; Tempelaar & Rosenkranz, 2019).

To date, researchers have studied individual ambidexterity from different perspectives, while studying it across different contexts (Mu et al., 2022; Pertusa-Ortega et al., 2021). It has been studied with emphasis on top level executives (Duan et al., 2021; Li et al., 2015) as well as studies that focused on middle management (Bonesso et al., 2014; Keller & Weibler, 2015).

Over the past decade, individual level ambidexterity has been linked with multiple constructs such as task autonomy and feedback (van der Borgh & Schepers, 2014), decision-making authority (Mom et al., 2009), intrinsic motivation (Kao & Chen, 2016) self-efficacy (Kauppila & Tempelaar, 2016; Mom et al., 2019), paradoxical practices (Papachroni & Heracleous, 2020), and psychological empowerment (Garcia et al., 2022). It has also been the focal point of many leadership associated studies such as transformational and transactional leadership (Jansen et al., 2009), inspirational leadership (Salas-Vallina et al., 2019) and even paradoxical leadership (Kauppila & Tempelaar, 2016). Furthermore, individual level ambidexterity has also been noted to have positive outcomes. In their study, Zacher et al., (2016) found a positive relationship between individual ambidexterity and employee innovative performance. Good and Michel (2013) noted that individual ambidexterity had a positive influence on task performance, while Ijigu et al. (2022) found employee ambidexterity to significantly impact employee work performance. However, ambidexterity has received considerably little attention both theoretically and empirically, calling to focus on a more individual perspective of employee ambidexterity, its outcomes and antecedents (Caniëls et al., 2017; Caniëls & Assen, 2019; Prieto & Santana, 2012; Singh et al., 2023)

2.2.3 Employee Involvement

The initial idea of employee involvement was first introduced in the 1930s through Kurt Lewin who brought fought for participation in decision making for employees (Vroom & Jago, 1988). In the research article by Petersen (2021), he mentions how although the concept later evolved, it was Tannenbaum and Schmidt (1958), who's work in the Harvard Business Review laid the foundation more formally on how involving employees in decision-making could lead to greater employee motivation and acceptance of decisions. However, it wasn't until the early 1960s when prominent scholars Thomas M. Lodahl and Judith G. Kejne wrote their research paper titled "The Definition and Measurement of Job Involvement" in 1965, which paved the way for many different researchers ahead. Over the years, the construct has garnered multiple different definitions from different scholars and thus has resulted in a rich and long history (Bakotić & Rogošić, 2017).

Moreover, Vroom (1962) in their research stated that “the degree of job involvement for a particular person was measured by his choice of ego rather than extrinsic factors in describing the sources of satisfaction and dissatisfaction on the job” (p. 161). Lodahl and Kejnar (1965) defined job involvement as "the degree to which a person is identified psychologically with his work, or the importance of work in his total self-image" (p. 24). This definition and the scale developed by researchers is the most widely used in literature (Brown, 1996; Ekmekçi, 2011). Furthermore, they also provided a second definition from employee involvement “the degree to which a person's work performance affects his self-esteem” (p. 25). Similarly, researchers Lawler and Hall (1970) for the first time made psychological distinguishes in job involvement, providing evidence on how it differs from intrinsic motivation and job satisfaction. They backed up Lodahl and Kejnar’s definition of job involvement and considered it to a significant contributor towards enhancing the motivation of employee. In a similar vein, Kanungo (1982) differentiating between work and job involvement, regarded job involvement as a particular belief concerning one's relationship with one's present job.

Furthermore, in their critical review of change theories for different stages of organizational change, Hussain et al. (2018) cited Glew et al. (1995) definition of job involvement stating that “employee involvement seeks to increase members’ input into decisions that affect organizational performance and employee well-being.” (p. 124). In more recent times, in their study Busch-Casler et al. (2021) defined employee involvement in terms of the entire workforces’ participation in order to improve the work environment, quality of products and productivity and gain competitive advantage, linking it to innovation. Other definitions of employee involvement have also been brought to light (Amah & Ahiauzu, 2013; Barringer & Bluedorn, 1999; Fenton-O’Creevy, 1998; Lawler, 2008; Noah, 2008; Wilkinson et al., 1996), however the despite such extensive research, there is still no evidence of a systematic review on the employee involvement, this has also been acknowledged and mentioned in the research by Kimmel et al. (2017).

Employee involvement is regarded as the oldest and most effective strategy that organizations use to overcome any sort of resistance that might come forth during change planning and implementation (Govindan, 2021). It has been referred to as a fixed attribute that is unlikely to

change due to any organizational factors (Carmeli, 2005). Additionally, it has been argued that a pivotal way for organizations to achieve responsiveness in this competitive market would be through employee involvement (Riordan et al., 2005). Hence literature on employee involvement has continuously drawn attention to employee actions and how they can facilitate and drive innovative ideas and processes (Engen et al., 2021). Organizations are now incorporating multiple resources to develop such strategies that will increase the involvement of employees such taking measures such has conducting behavioral surveys, making task forces, keeping them in the loops of things through group updates and job planning etc. (Staniec & Kalińska-Kula, 2021; Triantafillidou & Koutroukis, 2022).

Employee involvement has been the known to have a significant relationship with variables such as continuous improvement (Bakotić & Rogošić, 2017; van Assen, 2021), innovative performance (Rangus & Slavec, 2017a), career commitment (Jyoti et al., 2021), role clarity (ul-Hassan et al., 2021), HRM related performance attributes (Shantz et al., 2016), affective and normative commitment (Kuruüzüm et al., 2009) and work engagement (Scrima et al., 2014). Similarly, (Choi & Choi, 2020) used machine learning techniques to explore the determinants of job involvement, providing greater insight into the variable. Employee involvement was also seen to be impacted by participation in decision making and organizational learning as seen in the research by Saraf et al. (2022). Moreover, previous studies such as that by Hassan (2014) revealed that job characteristics and task significance had a strong influence on employees job involvement.

2.2.4 Innovative Work Behavior

Innovative behavior itself has been extensively studied in the literature and is seen as an imperative resource in today's corporate environments (Abbas & Wu, 2021; Akram et al., 2020). The term ‘innovation’ was first recognized in the early 1900s where it was seen as means to create, implement and combine something new whether it was products or new markets (Schumpeter, 1934). Prior to that, there have been a number of scholars that came forward with their own definitions of innovate work behavior. In the 1980s, scholar Teresa M. Amabile referred to innovation as when new ideas were successfully implemented in organizations (Amabile, 1983). Other definitions include “innovative behaviors reflect the creation of

something new or different" (Spreitzer, 1995, p. 1449) and "individuals' behavior to achieve the initiation and intentional introduction (within a work role, group or organization) of new and useful ideas, processes, products or procedures." (de Jong, 2007, p. 8).

Innovation can also occur at various other levels such as teams, organizations and even at an individual level (West & Farr, 1990). In their 1994 study, Scott and Bruce also postulated that innovation is viewed as a complex model, that incorporates multiple steps and activities and requires different individual behaviors necessary at each stage. Janssen (2000, 2003) described innovative work behavior as a multifaceted workplace behavior that is based on social interaction among employees, that involved three interrelated behavioral tasks namely, idea generation, idea promotion, and idea realization.

Over the years as the need for innovations becomes pivotal for bringing about changes and staying competitive, innovative work behavior has become a significant resource for companies, mainly because innovative behaviors encompass employees work activities required for innovation development (Anderson et al., 2014; Messmann & Mulder, 2012). The construct is said to incorporate all activities that are needed to be carried out to develop innovations in the workplace (Widmann et al., 2019). Innovative work behavior is comparable to having a proactive personality, which entails possessing characteristics for involvement that are viewed to alter their surroundings (AlEssa & Durugbo, 2022). It is considered as an organizational asset that can achieve success even in turbulent environments and is known to promote creativity and innovativeness of their employees (Woods et al., 2017).

Moreover, over the years, a range of variables have been investigated as antecedents in research on innovative work behavior (Prieto & Pérez-Santana, 2014). It has been found to be a prerequisite for organizational survival along with having relationships with constructs such as co-worker support (Bani-Melhem et al., 2018), affective commitment and job autonomy (Amankwaa et al., 2019), work climate and the concept of learning (Escribá-Carda et al., 2017; Middleton et al., 2019; Pandey et al., 2019). Employee engagement was also seen to influence innovative work behavior (Černe et al., 2017; Sifatu et al., 2020). Furthermore, El-Kassar et al., (2022) research also found a strong link between employee creativity and innovative work behavior. Other than that, Prieto & Pérez-Santana (2014) also conducted a thorough research on

the role of high-involvement human resource practices and its impact on innovative work behavior. Whereas, Ren & Zhang (2015) found organizational innovation climate to be an important contextual condition for innovative work behavior.

Furthermore, majority of the research conducted on the construct has been linked to leadership describing it as a key factor that drives innovative work behavior (Amankwaa et al., 2019; Hammond et al., 2011; Q. Miao et al., 2018). Work such as that by Newman et al. (2018) explored the effect of entrepreneurial leadership on innovative behavior. Rao Jada et al. (2019) in a moderated mediation study investigated the role of empowering leadership on innovative work behavior, whereas Zainal and Mohd Matore (2021) found transformational leadership to significantly influence innovative work behavior. It has also served as a mediating variable in multiple studies (Sanz-Valle & Jiménez-Jiménez, 2018; Shanker et al., 2017; Vuong et al., 2022).

2.2.5 Organizational Agility

The term agility was first used metaphorically, in management in the late twentieth century (Singh et al., 2013). From a business standpoint, it was originally mentioned in 1982 as the "ability to react quickly to rapidly changing circumstances" (Brown & Agnew, 1982, p. 29). While its earliest origins are in the manufacturing industry, it gained traction among practitioners and scholars in the 1990s due to its relevance and the necessity for companies to adapt quickly in order to cope with dynamic and evolving market conditions (Harraf et al., 2015).

Over the years, organizational agility has been defined in numerous ways. While most studies describe it in terms of a company's capacity to detect and respond to unanticipated vicissitudes in an innovative manner (Cheng et al., 2020). Others describe it as the capacity to recognize and grasp opportunities and prevent risks, as well as successfully respond to them by implementing necessary modifications and activities (Barlette & Baillette, 2022; Felipe et al., 2020). Oosterhout et al. (2006) defined it as the capacity to modify organizations and its processes decisively beyond the standard level of flexibility in order to effectively manage unforeseen external and internal changes. Breu et al. (2002) described it as the intellect, speed of skill development, teamwork, and culture of a workforce in adapting to changing business

circumstances. While Lu and Ramamurthy (2011) defined it as “the ability to cope with rapid, relentless, and uncertain changes and thrive in an environment of continually and unpredictably changing opportunities” (p. 932).

Organizational agility enforces the mentality of enveloping and recognizing market shifts as major possibilities for new strategic orientations (Zhang et al., 2022). Despite all that multitudes of definitions, the general consensus is that, organizational agility is a dynamic capability or combination of competencies that enable businesses to adjust quickly to change and achieve better performance in fluid, unstable, and competitive situations (Marjerison et al., 2022; Mrugalska & Ahmed, 2021; Teece et al., 2016; Walter, 2021). Apart from the definitions, it also has different standings within literature itself, such as being considered as a management philosophy (Sharp et al., 1999), performance capability (Cho et al., 1996), dynamic capability (Bessant et al., 2000) and even a management strategy (Paixão & Bernard Marlow, 2003). Organizational agility has been deemed as a tactical paramount for organizations to survive and prosper (Ahmed et al., 2022), because it possesses the ability to not only predict the future but also recognize and seize opportunities and address issues before they arise, while having the resources to cope with such challenges (Al-Omoush et al., 2020). As a result, recent empirical research have shown that organizational agility may greatly increase business performance and is also an important means of improving organizations' competitive advantage (Zhen et al., 2021).

Scholars have recently expanded their focus on organizational agility (Marjerison et al., 2022). They have long debated the positive impact of organizational agility on various aspects of business performance (Mrugalska & Ahmed, 2021). This is due to its ability to promptly explore new methods to accomplish goals and objectives, preemptively forecast and adjust to developments, and capitalize on opportunities (Ahmed et al., 2022; Oh & Teo, 2006). Research has also noted that organizations that are agile in nature have resulted in having higher revenues and profits as compared to non-agile organizations (Ciampi et al., 2022). This is also been supported by academic research, that has found a positive relationship between organizational agility and company performance (Felipe et al., 2020; Rafi et al., 2021; Wamba, 2022; Wanasida et al., 2021). Similarly, it has also been linked to product innovation (Puriwat & Hoonsopon, 2021), innovative performance (Guo et al., 2023), ambidexterity (Zhen et al., 2021), knowledge

creation (Al-Omoush et al., 2020) and even leadership (Akkaya & Tabak, 2020). Despite the rich conceptualization of agility, there is still a lack of empirical research on organizational agility (Wang et al., 2018).

2.3 Theoretical Underpinning

2.3.1 Self-Determination Theory

Self-determination theory is a theory of human motivation and is considered as one of the best established in the field of work (Deci & Ryan, 1985). It is a psychological motivation theory that is built on the conceptualization that humans are actively seeking ways to satisfy their psychological needs that are seen as driving factors for their motivation (Malhotra et al., 2022; Ryan & Deci, 2000). It is also recognized to advocate for personal objectives and is ideally suited to address the different forms of motivation and degrees of involvement necessary in today's modern workplace (Rigby & Ryan, 2018). It provides a framework for comprehending the motivating foundation of personality and social conduct, as well as the relationship between basic psychological requirements with positive outcomes (Ryan & Deci, 2022).

The theory also has a strong empirical foundation in behavioral science as it establishes a paradigm that enables the act of motivation and engagement (Ryan & Deci, 2017). As one of the main theories of motivation, self-determination theory provides a unique focus on both the quantity and quality of motivation as well emphasizes the importance of the kind of motivation that drives people’s behavior, alongside considerations of how much they are motivated (Teixeira et al., 2020). Consequently, there are two types of motivation i.e. self-determined or autonomous, and non-self-determined or controlled forms of motivation (Ryan & Deci, 2017).

Autonomous motivation “comprises both intrinsic motivation and extrinsic motivation in which people have identified with an activity’s value and ideally will have integrated it into their sense of self” (Deci & Ryan, 2008b, p. 182). According to Gagné and Deci (2005), being autonomously motivated is defined as being driven by one's interest in a task (intrinsic motivation) or by the integration of the activity's value and regulation into one's identity (integrated extrinsic motivation). Controlled motivation, in contrast, “consists of both external

regulation, in which one's behavior is a function of external contingencies of reward or punishment, and introjected regulation, in which the regulation of action has been partially internalized" (Deci & Ryan, 2008b, p. 182).

The theory also has a strong empirical foundation in behavioral science as it establishes a paradigm that enables the act of motivation and engagement (Ryan & Deci, 2017). As one of the main theories of motivation, self-determination theory addresses two types of motivation in autonomous motivation: intrinsic motivation (doing something for the sake of doing something), and extrinsic motivation (performing something for an ulterior purpose) (Gagné et al., 2022; Gao & Jiang, 2019a). Another fundamental tenet of the theory is that the degree to which individuals perceive their activities to be consistent with, and in service of, three basic psychological principles determines the quality of motivation they experience when indulging in any sort of act or behavior (Ryan & Deci, 2000, 2017). According to the theory, people have intrinsic needs that must be met in order for them to become fully developed and capable individuals who take on challenges, assume responsibility, and work toward pursuing their own interests (Kao et al., 2022; Ryan & Deci, 2000).

It further postulates that there are three specific intrinsic needs are namely autonomy, relatedness and competence (Ryan & Deci, 2017). Satisfying these innate is critical for efficient functioning as well as attaining their maximum potential and growth (Brière et al., 2021; Deci & Ryan, 2002). The need for autonomy refers to individuals' need to think that they have the ability to choose their own behaviors, such as initiating, controlling, and sustaining their own behavior, and when this need is fulfilled, people experience a sense of personal independence (Deci & Ryan, 2000; Gao & Jiang, 2019b; Ryan & Deci, 2000). The need for competence refers to the desire to gain a sense of mastery over one's position, as well as to acquire new information and abilities, in order to fulfill and satisfy one's goals (Deci & Ryan, 2000; Kao et al., 2022; Ryan & Deci, 2000). The need for relatedness refers to feeling of being connected to, and safe around others one's community i.e. a sense of belongingness and connection with others (Deci et al., 2017; Ryan & Deci, 2022).

Furthermore, the theory addresses that human behavior can be influenced by extrinsic and intrinsic motivations, which are classified based on the level of autonomy (Kao et al., 2022). Intrinsic motivation is said to be naturally autonomous and a work environment or condition that supports an individual's personal development and lead to positive outcomes like motivation, work performance, and well-being (Baard et al., 2004; Kao et al., 2022; Van den Broeck et al., 2016). Conversely, a work environment or condition that limits an employee's personal development and growth will result in negative outcomes like increased absenteeism, stress, and turnover rates (Deci et al., 1989; Kao et al., 2022). A substantial body of research has also shown that fundamental need fulfilment at work is associated to a variety of prosocial work behaviors (Jolly & Lee, 2021; Van den Broeck et al., 2016). Similarly, according to the theory, a person is extrinsically driven when they are motivated from within and this internalization results in individuals being self-determined (Howard et al., 2020).

As a result, we use this theory to understand the relationships being formed and to emphasize the importance of what employees feel and how, even if the employee isn't intrinsically motivated, they can identify and integrate with the values within themselves, allowing them to be extrinsically motivated, which can contribute to positive performance and behaviors (Sansone & Tang, 2021).

Self-determination theory marks a significant cultural movement towards employee empowerment in an individual setting (Nazir et al., 2020). It also challenges the conventional framework of understanding motivation by enrooting to describe different types of motivation based on their driving factors propelling a person's behavior (Rigby & Ryan, 2018). Furthermore, it will help us highlight the relationship between the individual and their social setting, and will be key mechanism for explaining the phenomenon of employee behavior (Deci & Ryan, 2000; Graves et al., 2013; Ryan & Deci, 2000).

However, while empirical evidence does exist on the sources of motivation that leads to certain behaviors, as proposed by self-determination theory, it has received little attention in literature (Deci & Ryan, 2008a; Zhao et al., 2023). As a result, our study employs self-determination theory not only to fill a theoretical gap in the literature, but also using the motivational aspects of the theory, we can explain how employees having a digital space for voice can lead to desired

positive behaviors and actions, such as indulging in innovative behaviors, using their resources to explore and exploit opportunities in the workplace, and becoming actively involved in their job, likewise, how having the organizational capability to support their ideas and keep up with the changing trends, can further provide employees with the motivation that leads to positive prosocial behavior.

2.4 Hypotheses Development with Theoretical Support

The following section will provide further theoretical support for hypothesis development.

2.4.1 Digitally-Enabled Employee Voice and Employee Ambidexterity

According to the definition given to employee voice by Van Dyne and Lepine (1998), voice allows the employees to not only challenge the status quo and provide suggestions to improve current organization functions but also intends that employees bring in new ideas and therefore involves idea contribution (Carnevale et al., 2017). After reviewing prior studies on ambidexterity, it was eminent that for employees to acquire a certain level of ambidexterity, they must have the strength and ability to create, carry out, and modify present structures for balancing exploration and exploitation tasks (Karani et al., 2021). Going further into detail after exploring the literature, it was noted that ambidexterity itself requires employees to simultaneously explore new knowledge for idea and product creation while building on existing knowledge to refine on products and procedures already available (Alves et al., 2023). This particular characteristic of ambidexterity that pushes employees to explore and exploit their resources can be accomplished when employees who actively engage in voice behavior, speak up and take advantage of opportunities that encourage the expression of new ideas and information aimed at bringing about functional change (Röllmann et al., 2021; Weiss & Zacher, 2022) or concerns about work practices, occurrences, or employee conduct that are detrimental to their organization (Shin et al., 2022).

Previous research, such as that of Malik et al. (2017a) demonstrated how voice, through being empowered, allows opportunities to challenge the status quo while additionally advocating for solutions between exploration and exploitation for employees. He continued by advising deeper research into the connection between HR practices and encouraging ambidexterity from the

viewpoint of a developing nation. This was supported by Grote and Guest (2017) who in their study hinted at expressions of voice being one of the major elements of HR practices that are used to promote employees well-being in the organization. In addition to the aforementioned connections, Shahriari and Hosseinnia (2022) in their research also found that organizational voice has a direct impact on ambidexterity.

Furthermore, self-determination theory states that an individual's behavior is governed by their level of self-determination, which is determined by whether their behavior was autonomous or controlled (Deci & Ryan, 1985; Teye et al., 2019). According to the theory, an individual's likelihood of engaging in a positive activity or behavior is increased if they perceive themselves as having autonomy, are committed to their choices, and feel ownership over their actions (Deci & Ryan, 1985; Teye et al., 2019). In other words, the level of motivation behind an initiative or behavior is contingent upon the type of initialization that has occurred (Teye et al., 2019). Employees will therefore feel more in control of their choices and be more willing to engage in activities that allow them to exhibit ambidextrous behaviors when they believe that they have appropriate digital spaces devoted to enabling their voice, and autonomy is being given a platform to participate in organizational outcomes.

Similarly, in the new technological era, digital employee voice has been opened up to new avenues that allows employees to raise concerns, make suggestions and contribute to idea creation in real time (Singh & Vanka, 2019). Taking this all in, and based on the above mentioned discussion, our research extends on using digital voice channels to investigate and expand the literature on how digital employee voice has an impact on ambidexterity at an individual level. Therefore, we hypothesize that,

H1: Digitally-enabled employee voice positively affects employee ambidexterity

2.4.2 Digitally-Enabled Employee Voice and Employee Involvement

Over the years, many scholars have observed that behaviors such as voice behavior are heavily influenced by how an employee feels and thinks about their work, which means that when employees are able to share their opinions and ideas with their co-workers and peers, they

perceive it as a positive outcome and become more willing to invest time and effort in maintaining and improving their current job status (Lu & Lu, 2020; Park et al., 2021; Singh & Vanka, 2019).

Employee voice is considered an significant aspect to the contributions employees make in their job, however this link has yet to be acknowledged in recent literature (Chaudhry et al., 2022; Um-e-Rubbab & Naqvi, 2020). Literature shows that employees who were given opportunities to voice their suggestion, ideas and participate in decision making, had the tendency to be more committed and engaged with their jobs, were satisfied and were viewed as competent and influential (Holland et al., 2011; Jha et al., 2019; McClean et al., 2018; Ruck et al., 2017; Weiss & Morrison, 2019; Weiss & Zacher, 2022). Employee voice has also become an important HR strategy in recent literature, which entails promoting high levels of employee involvement (Almeida et al., 2020) and seeing the benefits of employee involvement in promoting organizational outcomes, it has become necessary to promote such factors that help employees become more and more involved (Saraf et al., 2022). Voice is also said to make work units feel part of the organization, and therefore positive attitudes such as involvement and commitment are expected to emerge (Salas-Vallina et al., 2022).

Moreover, self-determination theory postulates that as humans we have the natural tendency to gravitate towards psychological growth (Jolly & Lee, 2021) and that we strive to fulfil our intrinsic needs through aiming to fulfil our interests and taking on responsibility and challenges (Deci & Ryan, 1985; Kao et al., 2022). Therefore, from the perspective of SDT, employee voice allows employees to take part in organizational decision making by using their ideas, and thus provides them with a sense of belonging and psychological ownership to their organizations (Şimşek & Gürler, 2019). This sense of ownership, acknowledgement and belongingness they receive from participation in decision making, fulfils their intrinsic psychological needs, thus commencing that those employees who have the opportunity to digitally voice their suggestions and raise concerns, will be more involved in their work. Hence with reference to the aforementioned points, we hypothesize that,

H2: Digitally-enabled employee voice has a direct positive relationship with employee involvement

2.4.3 Digitally-Enabled Employee Voice and Innovative Work Behavior

In many different studies employee voice has been taken as a proactive behavior that has been noted to show benefits in lines of creativity and innovations and being instrumental in providing employees personal benefit as well (Chen et al., 2020; Lin et al., 2020; Röllmann et al., 2021). According to Kremer et al. (2019), employee voice is considered a factor that links human resource management with employee performance, which is considered as an antecedent of innovation. It has also been noted that employee voice is the reflection of the employee goals that leads to further development, such that through the generating of new ideas and providing suggestions on organizational matters, an innovative behavior for employees is born (Miao et al., 2020).

The research findings of El-Kassar et al. (2022) also brought to light the how voice practices are positive predictors of organizational innovation. Prior studies such as Chen & Huang (2009) also provided insight into how innovative work behaviors are facilitated by HRM practices. Sifatu et al. (2020) who's research also documented the role of employee voice on enabling innovative work behavior, posited that employee behavior is such a mechanism that is reflective of the nature of work an employee does, that creates an intrinsic level of motivation from them which goes on to serve as the basis for innovative behavior. Previous research has contended that organizational innovation is a direct consequence of voice practices in connection to employees having a direct control (Shin et al., 2022) and while existing literature has indicated that there may be theoretical link between voice behavior and innovative work behavior, little is known about of the underlying mechanisms of this link (Chen et al., 2020). There have been call for studies to examine the antecedents of innovative work behavior from an individual perspective (Afsar et al., 2021). Similarly, few studies have also shed light on the effect of voice behavior on their own behaviors (Chen et al., 2020; Um-e-Rubbab & Naqvi, 2020).

Following self-determination theory and its characterization of the experience of autonomy that can be produced by job attributes, such as having control over certain facets of one's work or

increased freedom for decisions (Tamunosiki-Amadi & Dede, 2015), provides insight into how having a digital platform to voice an employee's opinion and contribute to ideas will have an impact on their innovative behavior. Furthermore, the theory research has discovered that having the freedom to choose what to do and how to accomplish an individual's work, with the innate feeling of having control over it and being free from any sort of limitation from the organization all increases an employee's capacity for innovative behaviors (Amabile, 1988). Thus, when employees produce autonomous motivation, they will be fueled by the intrinsic desire to explore autonomously, i.e. they will be more intrinsically motived to use their digital voice platforms to engage in positive work behaviors resulting in increased innovative work behaviors (Zhang & Yang, 2020).

Innovation has also been noted to be driven by technological opportunities such as and is considered as an idea that leads to something new rather than an invention (Baregheh et al., 2009; Yoo et al., 2012). Therefore, for our study, we aim to analyze if digitally-enabled employee voice does in fact lead to innovate work behavior. Hence we hypothesize that,

H3: Digitally-enabled employee voice has a direct effect on innovative work behavior

2.4.4 Employee Ambidexterity and Innovative Work Behavior

A study conducted by Majhi et al. (2021) observed that individuals who become proficient in striking a balance between exploratory and exploitative activities are more likely to successfully engage in innovative work behaviors. Innovations can occur when ambidexterity is used to integrate adaptation to the external environment with the alignment of internal resources (Plimmer et al., 2017). Additionally, ambidexterity depends on each employee becoming and continuing to be involved in the innovative work processes in every firm (Swart et al., 2019).

Furthermore, the literature of innovation has taken note of the fact that for innovations to occur a necessary step is to bring about changes in processes and procedures for the implementation of new ideas (Malik et al., 2017b). Relating this back to the characteristics of ambidexterity, we can concur that ambidexterity is vital for innovation (Raisch et al., 2009) as exploration and

exploitation provide employees with the groundwork for creating new ways in which ideas can be developed and implemented within current systems.

Previous studies have invoked a relationship between ambidexterity and organizational innovation, deeming it as an antecedent at an organizational level (Cao et al., 2009; Gibson & Birkinshaw, 2004; Junni et al., 2013; Raisch & Birkinshaw, 2008). And while existing research has also acknowledged the role of individual ambidexterity in assisting innovative workers in dealing with the duality associated with innovation, as well as the generation and implementation of new ideas (Majhi et al., 2021) there still remains a gap in literature relating to the outcomes of ambidexterity with regard to innovation, along a lack of conceptual understanding of ambidexterity at an employee's level and how it might result in certain employee behaviors, such as innovative work behavior (Bonesso et al., 2014; Caniëls et al., 2017; Swart et al., 2019).

Similarly, using self-determination theory, employees can attain levels of motivation and fulfil their psychological needs when they believe they have the resources and capabilities to act in ambidextrous ways. From the theory's perspective, when employees utilize both hands to search for new resources and broaden their knowledge portfolios, whilst engage in working efficiently to use existing resources and opportunities (Dedering & Pietsch, 2023), it invokes a sense of initiation, expertise and a feeling of being in control (Nazir et al., 2020). This internalization allows the employees to be extrinsically motivated, while also having their psychological resources such as relatedness to be satisfied, which will help them to pursue innovative behaviors.

Research also calls to address the outcomes of ambidexterity at an individual level, specifically since the study by Rosing and Zacher (2017) contributed to the literature, having focused on how ambidexterity at an individual level is pivotal for innovative performance. This has paved the way to further explore whether employee's ambidexterity is relevant for innovative work behavior as well. Therefore, in line with the preceding deliberations, and taking into account the pivotal role ambidexterity is said to play in contributing to innovation (Wei & Tang, 2022), we hypothesize that,

H4: Employee ambidexterity has a direct positive relationship with innovative work behavior

2.4.5 Employee Involvement and Innovative Work Behavior

Literature posits that employees could be creative or innovative only if they feel satisfied with and are involved in their company (Maamari & Osta, 2021). In his study Brown (2007) emphasized on the importance of the involvement of employees in fostering innovative work behavior. However, existing work of researchers have only just started to understand what influences innovative work behavior (Grošelj et al., 2020). Work such as the research by Kundu et al. (2019), found empirical evidence for the role of job involvement on innovative work behavior. When we talk about employee's involvement, there is no doubt that those employees that are highly involved in their jobs have more positive experiences in the workplace (Jyoti et al., 2021). Previous research also cites how innovative processes can be stimulated through employee involvement (Rangus & Slavec, 2017). In line with that we can assume that those employees who are highly involved in their organizations are potentially more motivated with high levels of satisfaction (Petersen, 2021; Potnuru et al., 2021) and hence would be more involved in activities that would result in innovative work behaviors.

Furthermore, with the help of self-determination theory we contend that through enhancing the involvement of employees in their jobs, it can develop a sense of value within the employees, it allows them to be intrinsically motivated and more deeply involved in their work. Thus when employees are intrinsically motived and their basic psychological needs are met, they will be more likely to be involved in their jobs and produce positive behaviors such as innovative work behaviors (Huang et al., 2019). Similarly, according to the theory, there are certain factors that can either increase or decrease the motivation of employees that leads them to achieving outcomes, and further strengthening this claim was the research done by Kundu et al. (2019) who identified that one such factor to be employee involvement, which enables employees to behave in an innovative way.

Literature also posits that innovative work behavior calls for initiating, developing and implementing new ideas and there is a need to examine its antecedents that can help achieve such a behavior (Afsar et al., 2021). And with the involvement of employees, that requires them to be immersed in the jobs, through our research we aim to prove that this involvement can lead to a

positive impact on innovative work behavior. Therefore, drawing from the conversation mentioned above, we hypothesize that,

H5: Employee involvement has a direct impact on innovative work behavior

2.4.6 The Mediating Effect of Employee Ambidexterity

The responses of new ideas generation, promotion and implementation in the work roles that are derived by innovative work behaviors have become essential to achieving success in a highly digitalized era (Wu & Yu, 2022). Opportunities of bringing innovation to work processes are although present in every job role but organizations provide a variety of different arrays of contexts that leads to innovation workings (Avby, 2022). Growing accustomed to having a competitive edge also leads to inertia and depreciation; hence, employees must continue to grow through the development of explorative and exploitative activities that provide for their innovative behaviors (MOUSSAVOU & Lee, 2022). Therefore, individual ambidexterity plays that bridge between digital voice mechanisms and innovative behaviors since it focuses on continuous and sustained effectiveness (Duncan, 1976; Gibson & Birkinshaw, 2004).

Building on self-determination theory, when employees feel that they have autonomy in their work they are more intrinsically motivated, while feelings of being controlled leads to lesser motivation (Mom et al., 2019). Hence when employees see that through the digital voice mechanisms, their contributions are being valued and accepted, it motivations them to use their resources to gain knowledge, create new ideas and also find ways to further improve existing systems (Caniëls et al., 2017; Chen et al., 2020), therefore exhibiting higher levels of innovative behaviors.

Previous studies have explored the role of organizational ambidexterity as a mediating variable leading to outcomes such as innovation and performance (Atuahene-Gima, 2005; Hwang et al., 2023; Jansen et al., 2006; Raisch & Birkinshaw, 2008; Úbeda-García et al., 2020). While the role of individual level ambidexterity as a mediator is relatively lesser acknowledged. However, Zhang et al. (2019) has acknowledged individual ambidexterity as a successful mediator in their study. Similarly, individual ambidexterity was also seen as a significant mediator in the

relationship between self-efficacy and innovative work behavior in the study by Shahzadi & Khurram, (2020), who conducted on their study on white collar workers in the pharmaceutical industry. Therefore, putting things into perspective, based on aforementioned discussion and the hypothesis presented earlier (H1 and H4), we further hypothesize that,

H6: Employee ambidexterity mediates the relationship between digitally-enabled employee voice and innovative work behavior

2.4.7 The Mediating Effect of Employee Involvement

While some have acknowledged that employee voice arrangements are important in employee involvement (Holland et al., 2019), prior voice research has not paid enough attention to voice in relation to involvement in innovation (Azevedo et al., 2021). As a result, the participation shown by employees in voice practices is likely to be critical in linking voice practices and organizational innovation and studies also show how innovation can be achieved through enhanced employee voice, with participation mediating between voice practices and organizational innovation (Azevedo et al., 2021; Shin et al., 2022).

Scholars over the years have concluded that organizational citizenship behaviors such as employee voice are strongly influenced by how an employee perceives or feels about their job, which impacts how much effort they will be willing to put into it (Lu & Lu, 2020). Employees who are highly involved in their jobs have been said to have positive experiences in the field of work they have chosen (Jyoti et al., 2021). Hence promoting factors which enhance the likelihood of increasing employees' involvement in their jobs would lead to fruitful outcomes for the individuals.

Previous studies such as that by Garg and Dhar (2017) have recorded the influence of Indian employee's engagement in the relationship between LMX and innovative behavior. Similarly, Tortorella et al. (2021) and van Assen (2021), both found employee involvement to be a successful mediator in their studies. Moreover, as evidenced by Huang et al. (2019) research, employees job involvement was also found to be a successful mediator between person-job fit and innovative work behavior.

In a similar vein, studies on self-determination theory indicate how HRM practices are crucial variables that enable employees to meet their basic psychological requirements (Marescaux et al., 2013; Zhao et al., 2023). According to the theory, it is asserted that individual factors have an impact on employee motivation and that an employee's behavior is a result of their autonomy and freedom of choice at work (Deci & Ryan, 1985, 2008; Graves & Sarkis, 2018). Therefore, using the theory, we may argue that the autonomy employees gain by using their platforms to voice their thoughts and concerns, motivates them to become more involved in the jobs they hold. This involvement is viewed as a catalyst that will enable employees to use their digital voice platforms to share ideas and behave in an innovative manner. Hence, taking into account the above mentioned thoughts, we hypothesize that,

H7: Employee involvement mediates the relationship between digitally-enabled employee voice and innovative work behavior

2.4.8 The Moderating Role of Organizational Agility

Rapid technological advancements and dynamically volatile markets have made it difficult for organizations to sustain themselves and remain afloat with their competitors, requiring them to become adaptable and versatile when it comes to embracing the ideas of innovation and change and start developing agile strategies to get through the arduous times (Attar & Abdul-Kareem, 2020). Organizational agility aids in recognizing the resources and competences necessary during those times of turmoil, as well as identifying novel prospects and expanding capacities to capitalize on such opportunities (Awwad et al., 2022; Harsch & Festing, 2020; Koçyiğit & Akkaya, 2020). It is regarded as the "manifestation of higher-order organizational capabilities" (Elazhary et al., 2023, pp. 150–151). It is said to bring an effective and efficient element to the daily activities as well as build a vision and get the necessary resources to achieve optimal performance (Akkaya & Qaisar, 2021; Hoonsopon & Puriwat, 2021; McCann et al., 2009).

Despite the broad understanding of agility, there is a scarcity of empirical research on organizational agility, particularly on its definitions, as well as a lack of studies addressing the approaches that aid organizational agility and its role in fostering success, along with the lack of conceptual and analytical focus (Franco et al., 2022; Wang et al., 2018). This lack of consensus

makes it difficult to build on prior research findings (Walter, 2021). However, based on what is available in the literature, executives and academics both believe that the existing degree of agility in the vast majority of firms is far from adequate (Joiner, 2019), particularly in today's turbulent climate. Furthermore, the literature does not provide a holistic and comprehensive overview of the existing body of knowledge regarding the links between digitization and agility, opening up promising future research avenues (Ciampi et al., 2022).

Agile organizations, because of their capacity to offer flexibility in creating, developing, and implementing strategies, necessitate constant research to acquire knowledge from the outside business ecosystems, and thus have a greater potential to keep their employees engaged and empowered (Darvishmotevali et al., 2020; Wamba, 2022). Similarly, backing this up with self-determination theory, employees who know that their organizations have the necessary capabilities and resources to govern their ideas and thoughts would be more motivated in achieving their desired goals (Deci et al., 2017; Ryan & Deci, 2000), thereby inducing higher levels of innovative behaviors in the workplace. Likewise, then employees know that their organizations have the resources and adaptability to keep up with the changing market trends, they would have a sense of feeling more autonomous in the workplace, thereby exhibiting actions leading to favorable pro-social behaviors (Kao et al., 2022) i.e. innovative work behavior.

Furthermore, the practice of organizational agility includes a variety of characteristics such as the ability to generate new ideas, as well as the willingness and proclivity to make decisions (Franco & Landini, 2022) and it also aids in the identification and exploitation of opportunities through the constant realignment of organizational processes (Levallet & Chan, 2022). Based on this, we hypothesize that,

H8: Organizational agility moderates the relationship between digitally-enabled employee voice and employee ambidexterity

H9: Organizational agility moderates the relationship between digitally-enabled employee voice and employee involvement

2.5 Theoretical Framework

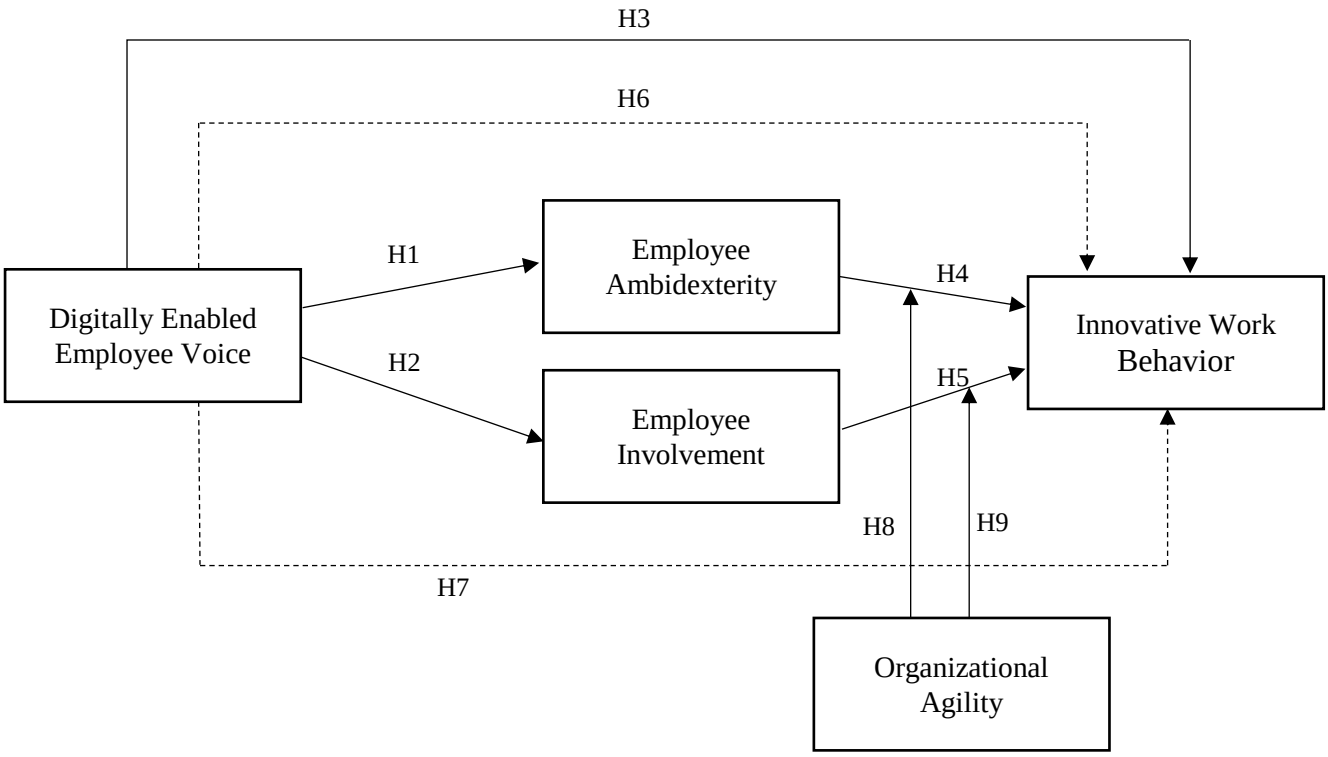

Figure 1: Theoretical Framework

2.6 Chapter Summary

This chapter begins with a background history of each variable, highlighting how it has previously been understood in literature and in what context it has been researched. The study of literature expands on the usage of self-determination theory, with its three psychological needs of autonomy, relatedness, and competence, as well as the sorts of motivations it supports. Furthermore, with the support of empirical research, arguments were elaborated on the main justifications for the hypothesis development, and the chapter concluded with the proposed model at the end.

CHAPTER No. 3

3 Methodology

3.1 Introduction

This chapter outlines the philosophy and approach taken to research the problems and objectives of the study. It begins by elucidating the ontological and epistemological stance adopted for the study, as well as the research design, target population selection and the development of the questionnaire using appropriate items for each variable to meet the needs of the study. Finally, it discusses the data collection techniques used as well as a brief overview of SmartPLS and SPSS for data analysis.

3.2 Research Philosophy and Design

According to Saunders et al. (2019), research philosophy is the systematic ideation of beliefs and assumptions regarding the generation of knowledge. These assumptions will undoubtedly impact how you perceive your research questions, the methodologies you utilize, and how you interpret your findings (Burrell & Morgan, 2017; Crotty, 2020). They are, in particular, ontological assumptions, epistemological assumptions, and axiological assumptions (Saunders et al., 2019).

Ontology refers to assumptions about the nature of reality (Saunders et al., 2019). In philosophical terms it refers to the study of our existence and the underlying essence of reality

or being (Killam, 2013). Epistemology relates to knowledge assumptions, what is regarded acceptable and legitimate knowledge, and how knowledge may be transmitted to others (Burrell & Morgan, 2017). Axiology, on the other hand, refers to the function of values and ethics (Saunders et al., 2019). Furthermore, according to Creswell and Creswell (2018), while there is still debate over the paradigms, also known as "worldviews or beliefs", the four most widely discussed in literature are: positivism or post-positivism, constructivism/interpretivism, transformative, and pragmatism. However, the most common research paradigms are positivism or post-positivism, and constructivism/interpretivism as stated by Petty et al. (2012) in their study. Focusing on the two most widely known and important ones, positivism or post-positivism refers to the unambiguous and accurate knowledge and is based on the philosophical attitude of natural researchers who deal with visible reality within society to produce general assumptions (Alharahsheh & Pius, 2020; Saunders et al., 2019). While interpretivism, founded as a critique of positivism from a subjectivist standpoint, emphasizes that people are distinct from physical occurrences in that they construct meaning (Saunders et al., 2019).

For the following research, an ontological and epistemological stance were undertaken. The study utilizers a positivist approach to investigate the influence of digitally-enabled employee voice on employee's ambidexterity, involvement and innovative work behavior. Furthermore, it employs a deductive methodological approach founded on the belief that digitally-enabled employee voice, employee ambidexterity and employee involvement will have positive impacts on innovative work behavior. Similarly, survey questionnaires were used in this study to collect data for the established hypotheses. The survey's questions were closed-ended, asking participants to select amongst the choices that were presented to them. With the study's temporal horizon in mind, a cross sectional strategy was taken into consideration. The data gathering period lasted from February through the first week of June, depending on employee availability and permission provided by the organizations.

3.3 Participants and Procedures

3.3.1 Population Sample

As a substantial contributor to the country's economy, the telecommunications industry is at the peak of digitalization, changing how people communicate and conduct business and ushering in

a new era of industrial transformation (Ahmed, 2021). Last year, Pakistan surpassed expectations in terms of innovation for their degree of economic growth for the first time, and was seen as a noteworthy climber in the Global Innovation Index 2022-23, joining the ranks of innovative achievers at the 87th position (Global Innovation Index, 2022). And this innovative boost has been commended to the nation's present rapid digital and technological evolutions (Farooq & Raju, 2019).

Regardless of the fact that most businesses around the world faced massive losses and layoffs during the pandemic, however, the telecommunication sector remained resilient and contributed to economic growth, and not surprisingly, Pakistan's telecommunication sector endured the least severe epidemic compared to other industries and kept the economy moving (Bhanbhro et al., 2021). There is no surprise that in these recent times, multiple industries are going through digitalizing their workplace, however the backbone of the digital economy, providing digital communication to all these industries, is the telecommunication sector of Pakistan (Business Recorder Research, 2022).

Nevertheless, while these telecom companies are assisting other industries in Pakistan, they are also undergoing multiple developments, which has raised competition in the telecommunication industry as a whole (Farid et al., 2022). With respect to that, this study concentrates on Pakistan’s telecommunication sector on the basis that the success of this sector is centered on their employees being the cornerstone of their organization's innovative capabilities, especially in such a volatile and ambiguous environment (Phairat & Potipiroon, 2022). In that their voice and involvement is more than just a “conversation enabler” between them and their organization (Ghani & Malik, 2022), but also contributes to their innovative work behavior.

Previous studies that researched on employee voice in Pakistan have focused their attention to the banking sector (Hunjra et al., 2010; Rani et al., 2021), SMEs (Rasheed et al., 2017, 2021), education sector (Ejaz et al., 2022; Khalid et al., 2022), textile industry (Basheer et al., 2021), IT and service sectors (Hassan et al., 2015; Nazir et al., 2020; Ullah et al., 2020), the manufacturing sector and petroleum sector (Chaudhry et al., 2022; Zhu et al., 2022). Research has even been conducted on entrepreneurs of Pakistan (Soomro et al., 2020) as well as the corporate sector

(Rafique & Bukhari, 2022). This leaves a major shortcoming in the literature when it comes to determining the outcomes and behaviors influenced by employee voice, as well as the extent to investigating how utilizing digital spaces for employee voice impacts the employees in Pakistan's telecommunications sector, making it the focus of our research.

3.3.2 Sampling Technique

For the following research, a self-administered questionnaire was developed, utilizing carefully sought-after items for each variable, that measured the intended purpose of the study. Convenience sampling technique was used based on the respondents' availability and willingness. Keeping in mind the depth of the questions and the knowledge of the organization required to answer such questions, the research specifically focused on managerial level employees i.e. senior managers, managers and assistant managers working in the telecommunication sector of Pakistan.

The following study focuses on managerial level employees, with the distribution of research questionnaires playing a critical role in data gathering. As a result, quality was of the utmost significance, necessitating data collection from experts rather than individuals who may be somewhat inexperienced with the topic being surveyed. In our case, experts are defined as people whose knowledge of the research area is tied to their line of work and the consequent practical expertise, as well as their educational qualifications. Furthermore, research has also shown that these experts are the very managers who work in their particular organizations (Diener & Špaček, 2021). Additionally, research indicates that people in managerial roles today have accumulated some level of professional experience, are more inclined to pursue professional development, and have had a significant impact on their organizations (Kim et al., 2020). Likewise, Badir et al. (2020) also mentioned the significant role of managers when it comes to promoting innovation in emerging economies.

As a result, when it comes to anticipating results such as innovative work behaviors while implementing new kinds of HR practices, managerial employee perception plays an important role. Additionally supporting this contention was the research conducted by Van Beurden et al. (2021), which demonstrated that employee perceptions of HR practices are an important

determinant of outcomes like organizational performance and employee motivational outcomes, and that these perceptions could contribute to the successful outcomes of HR practices that ultimately impact performance.

3.3.3 Sample Size

Recent developments suggest that researchers should determine sample size through power analysis (Hair, Risher, et al., 2019; Memon et al., 2020; Uttley, 2019) Power analysis determines the minimum sample size by taking into account the part of a model with the largest number of predictors (Hair et al., 2022; Memon et al., 2020; Roldán & Sánchez-Franco, 2012). While multiple programs are available to calculate the sample size, this research utilized G*Power as the idea choice for power analysis.

We carried out the study by following the procedures provided by Memon et al. (2020) on how to conduct power analysis using G*Power. A-priori estimation was employed for this research since it is used to estimate sample size before data collection. It is recognized as an effective way for determining the sample size required to be assured of establishing an effect (Uttley, 2019), and knowing the sample size before to data collection assists in making informed decisions and avoiding complications post-data collection (Memon et al., 2020).

Likewise, we set the power analysis to “A-priori: Compute required sample size – given α, power and effect size” and in the input parameters, we specified the effect size at 0.15 (medium effect), α at 0.05, and power at 0.95 and enter "5" as the number of predictors based on the maximization of arrows pointing to a single variable in the research framework. As a result, G*Power determined that the minimum sample size required for this study was 138. However, keeping in mind that a sample size of between 160 and 300 is considered adequate for performing multivariate statistical analyses such as PLS-SEM (Memon et al., 2020), we set to achieve a target sample size of 220-250.

3.3.4 Data Collection Procedures

The data for this research was acquired utilizing two distinct methodologies. Firstly, for the online data collection approach employed, a questionnaire was designed and administered via

Google Forms. The link to the questionnaire was disseminated to the intended target audience through various channels such as LinkedIn, Facebook, email, and personal contacts such as WhatsApp. A total of 289 individuals were contacted via LinkedIn, while 10 respondents were reached through WhatsApp and 5 through email. The employees on LinkedIn were searched through their respective organizations and then individually messaged based on their current position in the organization.

Secondly, a physical data collection method was also adopted by distributing 100 printed copies of the questionnaire to relevant organizations. Prior to the data collection, the organizations were approached with a consent letter from the university along with a copy of the questionnaire. Following this approach, 94 completed forms were returned. In line with convenience sampling and a sample size set between 220-250, approximately 400 individuals were reached out to participate in the research, out of which 255 responses were collected, combining both the online and physical data collection methods.

3.4 Measures

A five point Likert scale based questionnaire was designed ranging from 1=strongly disagree to 5=strongly agree. The questionnaire was divided into two sections. The first section included 7 demographic questions while the second section had a total of 47 item questions.

3.4.1 Digitally-Enabled Employee Voice

A 10 item scale was adapted by Cheng et al. (2020) that has a reliability of 0.90. To better align with the purpose of our study, we have added the phrase “Through the use of digital voice channels I..” at the start of each item. Sample item include “Through the use of digital voice channels I proactively voice out constructive suggestions that help the organization reach its goals”

3.4.2 Employee Ambidexterity

This construct adapted the 11 item scale developed by Mom et al. (2007), that has a Cronbach alpha of 0.88. The phrase “In the last year I was engaged in” has been changed to “In my current organization, I am engaged in”. Sample items include “In my current organization, I am engaged in searching for new possibilities with respect to products/services, processes or markets” and

“In my current organization, I am engaged in activities which you can properly conduct by using your present knowledge”.

3.4.3 Employee Involvement

The scale developed by Kanungo (1982) was adopted that had 10 items and a Cronbach's alpha of 0.83. Sample items in the study include “I am very much involved personally in my job” and “The most important things that happen to me involve my present job”.

3.4.4 Innovative Work Behavior

For the following variable, 10 items were adapted from the questionnaire constructed by Afsar et al. (2019), with a Cronbach’s alpha of 0.89. The questions have been changed into statements by replacing the phrase “How often do you” to “In my current organization, I often”. Sample items include “I often search out new working methods, techniques or instruments” and “In my current organization, I often systematically introduce innovative ideas into my work practices”.

3.4.5 Organizational Agility

A 6 item scale by Cegarra-Navarro et al. (2016) was adapted with a Cronbach’s alpha of 0.92. To comply with the nature of our study, the phrase “we have” has been changed to “My organization”. A sample item includes “My organization continuously search for forms to reinvent or redesign our organization”.

3.5 Content Validity

Content validity is used to assess whether the chosen scale accurately measures the variables its intended to measure (Blumberg et al., 2014) and can be confirmed through experts in the similar field (Kumar, 2018). Therefore, a research proposal consisting of the research objectives, research gap and significance, the questionnaires along with the operational definitions of the variables being used in the study were submitted to the supervisor of this research and two other expert professors in the field of HRM. After addressing the concerns based on their feedback and getting the approval, the questionnaire was formed both for online and physical data collection.

3.6 Pre-Testing

Prior to the main data collection, the online questionnaire was pre-tested for the study. The main purpose of the pre-testing is to identify any questions that the respondents may find offensive, or confusing (Blumberg et al., 2014). Following completion of the questionnaires, respondents provided feedback, which included the overall time taken to complete the survey, any shortcomings they discovered with the questionnaire and its formatting and design, and any issues they encountered with the questions. After no errors were identified during the pre-testing phase, the main data collection phase began.

3.7 Analytical Procedure

After the data was collected, it was processed and converted into useful information utilizing SPSS, by taking into consideration a series of statistical analysis procedures. Following the processing and formatting, the data was transferred to SmartPLS version 4 for further analysis. Using SmartPLS, we carried out multiple tests to ensure the reliability and validity of the study along with testing the hypothesis for the direct relationships in the model along with the mediation and moderation analysis.

Structured equation modeling (SEM) in recent times is one of the most powerful and widely used research methodologies in business research, with one of its two procedures being composite-based partial least squares SEM (PLS-SEM) (Hair et al., 2022; Peng & Lai, 2012; Wold, 1982). PLS is a variance-based structural equation modeling technique that can be used to test hypotheses in complex path models in an exploratory fashion (Nitzl et al., 2016). Procedures such as composite-based SEM (e.g. PLS-SEM) have been proposed as a method for estimating complex cause-effect relationship models (Rigdon, 2012, 2014). PLS-SEM is thus an effective tool for identifying and establishing relationships between constructs, as well as developing explanations for these relationships (Richter et al., 2016).

PLS-SEM was employed in this research for two reasons; first, because the main objective of this study was to predict dependent variables (Roldán & Sánchez-Franco, 2012) and using this method provides a useful robustness check of the analysis (Peng & Lai, 2012) as well as more meaningful results (Memon et al., 2017; Richter et al., 2016) and second, due to the use of two mediators in this study (i.e. employee ambidexterity and employee involvement) (Hair et al.,

2022; Nitzl et al., 2016; Richter et al., 2016), knowing that PLS-SEM is more suited to explain complex models or relationships (Fornell, 1982; Wold, 1985).

3.8 Data Screening

To ensure the validity and relevance of the research, out of the total 255 responses received, 33 of the obtained responses were excluded as they either were not employed within the telecommunications sector or did not belong to the target audience. Consequently, the final dataset used for analysis comprised of 222 valid responses.

3.9 Common Method Bias

Many researchers have deemed that self-reported questionnaires lead to major concerns of common method bias in research (Podsakoff et al., 2003; Rodriguez-Ardura & Meseguer-Artola, 2020). Common method bias (CMB) refers to the degree of covariance among the measured items as the data was collected using a single source (Hair et al., 2014; Podsakoff et al., 2003). To address this issue, certain steps were employed. Firstly, to ensure that the respondents completely understood the questions and the aim of the research, items were pilot tested beforehand so that any items found confusing or offensive were removed. Secondly, complete anonymity and confidentiality were adhered throughout so that respondents fill the questionnaire without any fear of judgement. Third guidance and instructions were provided to the respondents that would make their process easier. In terms of the statistical approaches, Harman's (1976) single-factor test was employed. According to authors such as Podsakoff et al (2003) and Rodriguez-Ardura & Meseguer-Artola (2020), a cut-off value of less than 50% indicates that CMB has no impact on the results, whereas Babin et al (2016) states that a cut off value of less than 40% is deemed acceptable. Nonetheless, all the 47 items were included in the test and findings showed a variance of 11.5%, which is below the 40%, thereby indicating that CMB was not a concern in this research.

3.10 Ethical Considerations

To comply with ethical considerations and to ensure a level of comfort for the participants, a university approved document was sent to all organizations prior to data collection. The document stated that the research and responses of the participants were only to be utilized for

academic purposes. The HR department heads were also briefed on the purpose of the research in order to get their permission to visit the organizations and gather data from their personnel. The organizations were also assured that a high level of confidentiality and anonymity will be maintained throughout. Meaning that there will be no disclosure material such as the name of the organization or the identity of the responders, will be disclosed.

The questionnaire itself contained no personal questions, such as their name, phone number and the current organization they work at, that might be misused to harm the respondents in any manner. The respondents' participation in both methods of data collection (i.e. physical and online) was entirely voluntary. Participants had the option to withdraw from the study at any time, and their decision was respected. Increased efforts were also made during the research process to ensure that personal bias was avoided. Each individual participant was asked if they were comfortable filling out the questionnaire and participating in the study even throughout the physical data collection process. Aside from their individual consent, they were informed about the research and what we intended to learn from their responses. Furthermore, all respondents were asked to fill out the questionnaires with complete honesty, and any information deemed incorrect or fallacious in data findings was discarded in order to maintain the data's integrity.

3.11 Chapter Summary

This chapter outlines that an ontological and epistemological approach was employed for the research. From February through June, data was collected via self-administered questionnaires from managerial level employees working in Pakistan's telecommunications sector. Following data filtering, the total number of responses was reduced from 256 to 222. Results were produced with the use of SPSS and SmartPLS using the final dataset of 222 respondents.

CHAPTER No. 4

4 Results

4.1 Introduction

This chapter describes the research findings obtained by running several tests utilizing SPSS and SmartPLS. The final data set of 222 responses was used to analyze the hypotheses proposed. This chapter contains the study's descriptive and demographic statistics, as well as the measurement and structural model, and lastly the hypothesis testing.

4.2 Demographic Analysis

The target population for this study were the managerial employees working in the telecommunication sector of Pakistan. The managerial level comprised of senior managers, managers and assistant managers, respectively. A total of 404 individuals were contacted through online and physical data collection methods, out of which 255 questionnaires were collected. After screening through the dataset, a final sample size of 222 respondents working at managerial positions in the telecommunication sector was used in the analysis.

Table 2 depicts that out of the final 222 respondents, 160 of them were male (72.1%) while 61 were female (27.5%), while one individual chose to keep their identity anonymous. From the responses obtained, 55 of them were senior managers, 77 were managers and the rest of the 90 individuals were assistant managers. Majority of the respondents belonged to the Federal Capital, Islamabad. Most of the respondents were at the age of 31 to 40 years (47.7%), while others belong to the age bracket of 20 to 30 years (39.2%) and 41 to 55 years (13.1%). Moreover, in total 66.2% had a master's degree while 25.2% had a minimum qualification of a bachelor's degree.

Table 2: Demographic Details of the Respondents

Demographic Variables	Categories	Frequency	Percentage
Gender	Male	160	72.1
	Female	61	27.5
	Rather not say	1	.5
Age	20 to 30 years	87	39.2
	31 to 40 years	106	47.7
	41 to 55 years	29	13.1
Highest Qualification	High School Diploma	3	1.4
	Undergraduate	53	25.2
	Masters	146	66.2
	Other	15	7.2
Current Position	Senior Manager	55	24.8
	Manager	77	34.7
	Assistant Manager	90	40.5

4.3 Descriptive Statistics

Descriptive Statistics analysis aids in providing a concise summary of the data collected. It is evaluated using data characteristics such as the number of responses, minimum and maximum values, mean, and standard deviation Table 3 displays the results of the descriptive statistics of the study. As shown in the table, a total of 222 responses were collected and analyzed for this research The variables used in this study are Digitally-Enabled Employee Voice (DEEV),

Employee Ambidexterity (EA), Employee Involvement (EI), Innovative Work Behavior (IWB) and Organizational Agility (OA).

The maximum and minimum value shown in the table represents the Likert scale options provided to the respondents. The minimum value of 1 represents 'strongly disagree', while the value 2 represents 'disagree'. From the maximum values, 5 represents 'strongly agree' while 4 represents 'agree'. The mean is the average of all data collected, and standard deviation describes values that are close to the mean. A low standard deviation implies that the data is close to the mean, whereas a high standard deviation shows that the numbers are spread out to the standard deviation value. The average responses for digitally-enabled employee voice (DEEV, Mean=3.68) are in between neutral and agree and by looking at the standard deviation which is 0.606, we can concur that the deviation from the mean response is not too extreme, hence it provides more validity to the mean. Likewise, employee ambidexterity (EA, Mean=3.90) indicates that responses were close to agree, with a standard deviation of 0.525, suggesting that deviation was close to the mean value. Moreover, employee involvement (EI, Mean=3.28), show that the average responses were neutral and the standard deviation of 0.557 concludes that the deviation was not extreme. Furthermore, both innovative work behavior (IWB, Mean=3.85) and organizational agility (OA, Mean=3.84) also display that their average responses were close to agree and with standard deviations of 0.504 and 0.668, shows that a low number of respondents opted on the extreme sides of the scale.

Table 3: Descriptive Statistics

	Sample Size	Minimum	Maximum	Mean	Standard Deviation
DEEV	222	1	5	3.68	.606
EA	222	2	5	3.90	.525
EI	222	2	4	3.28	.557
IWB	222	2	5	3.85	.504
OA	222	1	5	3.84	.668

4.4 Measurement Model

The measurement model is used as the first step in the analytical procedure, that is used to test the internal consistency reliability, convergent validity (CV) and DV of the constructs.

4.4.1 Internal Consistency Reliability

With the PLS algorithm, we used the composite reliability to measure the internal consistency reliability, which assesses the degree to which the items are a measure of the latent components. (Hair et al., 2019; Ramayah et al., 2017). It has been suggested that constructs with values of 0.7 and above are considered satisfactory (Nunnally, 1978; Nunnally & Bernstein, 1994; Richter et al., 2016). For this study the results indicate that the composite reliability for all he constructs are above the cut-off value digitally-enabled employee voice (0.914), employee ambidexterity (0.901), employee involvement (0.875), organizational agility (0.919) and innovative work behavior (0.914), thereby indicating that the internal consistencies are measured at a high level.

4.4.2 Convergent Validity (CV)

The convergent validity (CV) refers to the extent to which the constructs converge to help explain the variance of its items (Rasheed et al., 2021). CV was assessed through the average variance extracted (AVE) for all items on each construct. As mentioned by Avkiran (2017), an AVE score of 0.5 is deemed as satisfactory while outer loadings should have a value of 0.7 or greater. In other studies, such as that done by Chin et al. (1997) also considered items with an outer loading of 0.6 to be acceptable as well. Therefore, to achieve the desired AVE results, items with weaker factor loadings were deleted. The results indicate that while digitally-enabled employee voice had an AVE of 0.518, employee ambidexterity was able to reach the minimum level of variance (0.504) after EA9 and EA11 were deleted. Similarly, for employee involvement an AVE value of 0.54 was able to be obtained after EI 1,2,7 and 8 were deleted. Likewise, after eliminating IWB1, the variable (IWB) was able to reach an AVE of 0.544.

The results of the internal consistency reliability and CV are shown in Table 4.

Table 4: Internal Consistency, Reliability, and Convergent Validity

Constructs	Measurement items	Loadings	Cronbach's α	CR	AVE
DEEV	EV1	0.786	0.897	0.914	0.518
	EV2	0.717			
	EV3	0.784			
	EV4	0.78			
	EV5	0.794			
	EV6	0.694			
	EV7	0.673			
	EV8	0.64			
	EV9	0.628			
	EV10	0.675			
EA	EA1	0.719	0.870	0.901	0.504
	EA2	0.726			
	EA3	0.656			
	EA4	0.763			
	EA5	0.715			
	EA6	0.74			
	EA7	0.716			
	EA8	0.684			
	EA9	item deleted			
	EA10	0.662			
	EA11	item deleted			
EI	EI1	item deleted	0.758	0.875	0.54
	EI2	item deleted			
	EI3	0.716			
	EI4	0.69			
	EI5	0.814			
	EI6	0.776			
	EI7	item deleted			
	EI8	item deleted			
	EI9	0.666			
	EI10	0.737			
OA	OA1	0.79	0.895	0.919	0.655
	OA2	0.794			
	OA3	0.8			
	OA4	0.887			
	OA5	0.769			
	OA6	0.812			
IWB	IWB1	Item deleted	0.881	0.914	0.544
	IWB2	0.603			
	IWB3	0.755			
	IWB4	0.78			
	IWB5	0.734			
	IWB6	0.757			
	IWB7	0.768			
	IWB8	0.773			
	IWB9	0.75			
	IWB10	0.698			

4.4.3 Discriminant Validity (DV)

The discriminant validity is referred to as the extent to which a construct empirically differs from the other constructs in the structural model. To assess the discriminant validity, two different approaches were followed. Firstly, following the suggestions of Fornell and Larcker (1981), that states that the square root of AVE for each latent construct must be higher than the value of the same construct. The results displayed in Table 5 show that the AVE of the latent constructs have higher values compared to the squared correlations of the latent variables, which confirms the discriminant validity (Fornell & Larcker, 1981).

Table 5: Discriminate Validity (Fornell and Larcker Criterion)

Latent Constructs	Digitally-enabled Employee Voice	Employee Ambidexterity	Employee Involvement	Innovative Work Behavior
Digitally-enabled Employee Voice	0.720			
Employee Ambidexterity	0.562	0.71		
Employee Involvement	0.269	0.228	0.735	
Innovative Work Behavior	0.305	0.541	0.251	0.737

Secondly, to further confirm the discriminant validity, the HTMT test (Heterotrait-Monotrait Ratio) was used. Henseler et al (2015) suggests that the HTMT method provides a more consist results frame, further adding that while a value less than 0.9 is acceptable, a more conservative cut-off value would be at 0.85. Hair et al., (2017), however deemed that any value above the 0.90 threshold would suggest a lack of DV. The results reported in Table 6 confirms that the study in fact did not exceed the recommended threshold and the overall measurement model displayed adequate results for CR, CV and DV.

Table 6: Discriminate Validity (HTMT Criterion)

Latent Constructs	Digitally-enabled Employee Voice	Employee Ambidexterity	Employee Involvement	Innovative Work Behavior
Digitally-enabled Employee Voice				
Employee Ambidexterity	0.614			
Employee Involvement	0.28	0.221		
Innovative Work Behavior	0.333	0.598	0.226	

Note: Criteria: DV is established at HTMT0.85

4.4.4 Multicollinearity

Additionally, the variance inflation factor (VIF) was also assessed to rule out any indications of multicollinearity. VIF is often used to evaluate the formative collinearity of indicators (Hair et al., 2019). A VIF value greater than 10 is mostly regarded as indication of multicollinearity (Burns & Burns, 2008). However, as recommended by Hair et al. (2014) for multicollinearity is a cute-off value of 5 is usually recommended. However, in their study, Mason and Perreault, (1991) also state that a value of 5 or more indicates a critical collinearity problem among indicators formatively measured constructs. Ideally, the VIF value should be close to 3 and lower (Purwanto, 2021). Hence, for this study, the VIF value of each construct, as shown in table 7, were well below the cut-off value of 5, indicating that any issue of collinearity was absent from the study.

Table 7: VIF values

	DEEV	EA	EI	IWB
DEEV		1	1	1.508
EA				1.476
EI				1.088
IWB				

4.5 Structural Model and Hypothesis Testing

To assess the structural model and draw results, PLS-SEM was used. The structural model examines the causal relationships between the constructs (Sang et al., 2010). THE PLS-SEM is used to confirm the finding through a standard assessment criteria and also including the

coefficient of determination (R^2) and effect size (f^2) (Hair et al., 2019). R^2 refers to the explanatory power of the independent variable(s) with respect to their corresponding dependent variables. Whereas, f^2 not only indicates the effect size but also determines the contribution of the independent variable to the R^2 values of the endogenous variable i.e. dependent variables (Hair et al., 2013, 2016; Hair et al., 2019).

Consequently, the values of R^2 and f^2 were examined and are illustrated in Table 8 and 9. As displayed, digitally-enabled employee voice explains 31.6% of employee ambidexterity, 7.2% of employee involvement and 31% of innovative work behavior, respectively. Furthermore, Cohen (1988) and Cohen et al. (2011) recommended cut-off values for measuring the effect size (f^2) with values indicating 0.02 (small), 0.15 (medium) and 0.35 (substantial) effect size, respectively. The results show that digitally-enabled employee voice has a substantial effect on employee ambidexterity (0.462), a small to medium effect on employee involvement (0.078) and almost no effect on innovative work behavior (0.001). Whereas, employee ambidexterity was seen to have a medium to substantial effect on innovative work behavior (0.271), while employee involvement had a small effect on innovative work behavior (0.026).

Table 8: Results of R^2

Latent constructs	Coefficient of determination R^2
DEEV	-
EA	0.316
EI	0.072
IWB	0.31

Table 9: Results of f^2 and the Effect Size

Latent constructs	f^2	Effect size
DEEV → EA	0.462	Substantial effect
DEEV → EI	0.078	Small to medium effect
DEEV → IWB	0.001	No effect
EA → IWB	0.271	Medium to substantial effect
EI → IWB	0.026	Small effect

Employing the bootstrapping technique by Hair et al. (2022) with resampling of 5,000 resamples, the statistical significance of the hypothesized model was calculated. The results indicate that digitally-enabled employee voice has a significant positive relationship with employee ambidexterity (H1: β= 0.562, *p*=0.000, *t*=8.405), and employee involvement (H2: β= 0.269, *p*=0.000, *t*=3.754). Surprisingly, the results for the PLS path coefficients revealed that digitally-enabled employee voice does not have a positive relationship with innovative work behavior (H3: β=0.024, *p*=0.344, *t*=0.316). Moreover, the results also revealed that both employee ambidexterity (H4: β=0.397, *p*=0.000, *t*=5.539) and employee involvement (H5: β=0.091, *p*=0.074, *t*=1.448) have a positive relationship with innovative work behavior. In terms of the indirect effects, the results indicated that employee ambidexterity successfully mediated the relationship between digitally-enabled employee voice and innovative work behavior (H6: β=0.295, *p*=0.000, *t*=5.054) and employee involvement also mediated the relationship between digitally-enabled employee voice and innovative work behavior (H7: β=0.037, *p*=0.063, *t*=1.859). Furthermore, in terms of the moderator, the results revealed that while organizational agility was able to successfully moderate the relationship between employee ambidexterity and innovative work behavior (H8: β=-0.195, *p*=0.007, *t*=2.469), it did not moderate the relationship between employee involvement and innovative work behavior (H9: β=0.071, *p*=0.14, *t*=1.082). The results of the structural model are presented in Table 10.

Table 10: The Result of Structural Model Assessment

Hypothesis	**Path**	**B**	***t* value**	***p* value**	**Results**
H1	DEEV → EA	0.562	8.405	0.000	Supported
H2	DEEV → EI	0.269	3.754	0.000	Supported
H3	DEEV → IWB	0.024	0.316	0.344	Not Supported
H4	EA → IWB	0.397	5.539	0.000	Supported
H5	EI → IWB	0.091	1.448	0.074	Supported
H6	DEEV → EA → IWB	0.295	5.054	0.000	Supported
H7	DEEV → EI → IWB	0.037	1.859	0.063	Supported
H8	OA x EA → IWB	-0.195	2.469	0.007	Not Supported
H9	OA x EI → IWB	0.071	1.082	0.140	Not Supported

Notes: *p*<0.1 accepted Hair et al. (2022)

Likewise, figure 2 displays the overall results of the PLS-SEM model involving both mediators and the moderator. The figure shows the constructs with their respective R-square values, path coefficients and outer loadings.

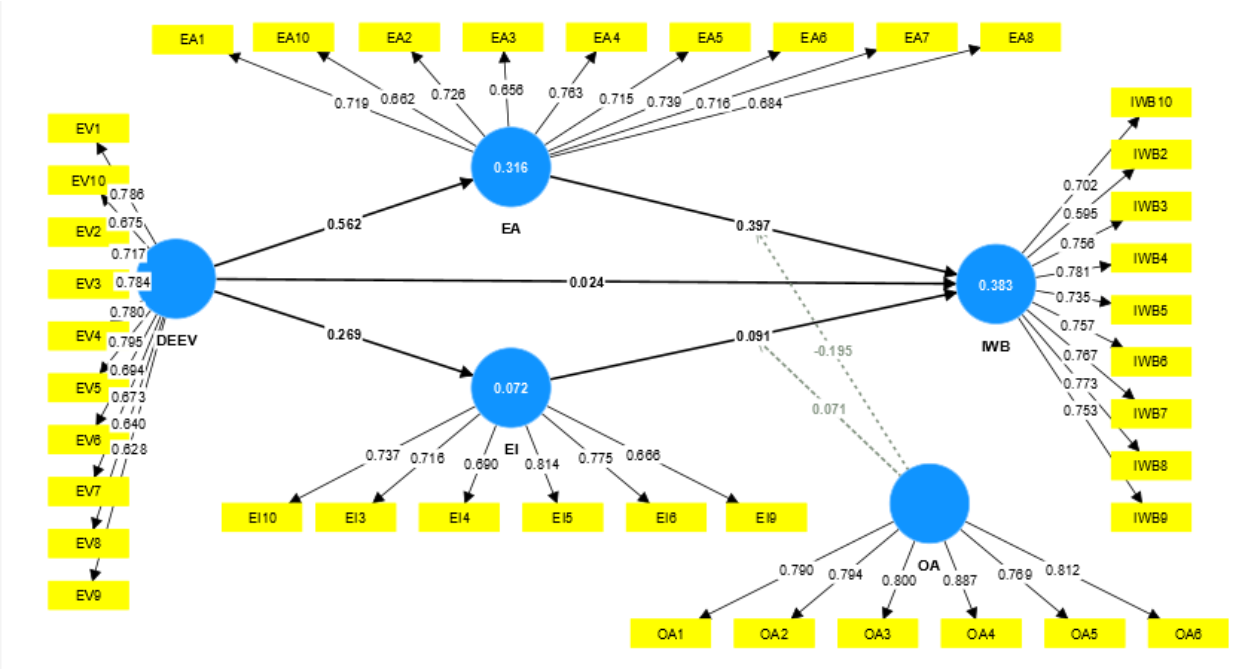

Figure 2: PLS-SEM Results

4.6 Chapter Summary

This chapter displays the overall results and findings of study consisting of a sample of 222 managerial employees working in the telecommunication sector. The results revealed that digitally-enabled employee voice had a positive relationship with employee ambidexterity and employee involvement. However, it failed to have an influence on their innovative work behavior. Moreover, both employee ambidexterity and employee involvement were seen to have a significant relationship with innovative work behavior. Likewise, both of them also proved to be successful mediators in the relationship of digitally-enabled employee voice with innovative work behavior. In addition to that, while organizational agility was seen to moderate the relationship between employee ambidexterity and innovative work behavior, it failed to achieve any success on the relationship between employee involvement and innovative work behavior.

CHAPTER No. 5

5 Discussion

5.1 Introduction

This chapter starts off with the comprehensive overview of the findings and the discussion of the hypothesized results analyzed in the previous section. It sheds light on the unique perspective taken to examine the relationships between digitally-enabled employee voice, employee ambidexterity, employee involvement and organizational agility with innovative work behavior through a mediation and moderation model, in the context of Pakistan's telecommunication sector. Following the discussion, this section highlights the theoretical contributions and the practical implications of the research, as well as the limitations encountered throughout the

conduct of the research and recommendations for future prospective researchers. It concludes with a summary of the entire study.

5.2 Discussion

The present research took a quantitative approach to investigating the positive outcomes and behaviors influenced by digitally-enabled employee voice. The findings of the research indicate that digitally-enabled employee voice has a positive impact on employee ambidexterity (H1). This signifies our previous stance that employees who are able to voice out their suggestions and opinions are better able to grasp on exploiting their existing resources and exploring new options for idea generation (Gibson & Birkinshaw, 2004). It further concurs with previous studies that suggested that HR practices such as employee voice are considered to be important factors that contribute to individual ambidexterity (Chang, 2016; Salas-Vallina et al., 2022). The positive results of the hypotheses thus confirm that employees using their digital platforms, enables them to share their knowledge and collaborate with others without any fear. It provides them with a platform that empowers them to cultivate new experiences and explore new fields that actively promotes the two factors that makes an employee ambidextrous; exploitation and exploration.

To our knowledge, this is the first study that empirically links digitally-enabled employee voice to employee ambidexterity and thereby expands the research by confirming a direct link between the two constructs. Previously, employee voice had been linked to many individual level outcomes such as increased individual performance (Ng & Feldman, 2012). However, it had been suggested by Mom et al. (2015) that having an HRM perspective on ambidexterity would be a beneficial approach towards enabling individual level ambidexterity. Much to that stance, research has been carried out to test how the inclusion of HR specific practices can enable employees to act ambidextrously (Rosing & Zacher, 2017). Such as work done by Prieto and Santana (2012), that tested the use of high-involvement human resource practices to facilitate ambidexterity through a field study of 198 companies from Spain and Patel et al. (2013) who explored the use of high-performance work system (HPWS) to exhibit ambidextrous behavior in organizations by carrying out the research on 215 high-tech small to medium-sized enterprises (SMEs). And there is no surprise that employee voice is deemed central to HPWS (Budd et al., 2010; Wilkinson et al., 2014). Therefore, when by employees use their digital platforms as

means to voice their suggestions and opinions, it prompts them into experimenting with new ideas and thoughts and also discovering ways that can refine their current work (S. Singh & Vanka, 2019) which is the basis for ambidextrous behavior i.e. exploration and exploitation.

Likewise, digitally-enabled employee voice also proved to have a significant positive relationship with employee involvement (H2). Which establishes the fact that those management employees who use digital platforms to voice out opinions, suggestions and take an active part in decision-making and problem solving are more inclined to be in involved in the jobs. Additionally, this means that being given an opportunity to have a say in organizational matters via voice enables a sense of psychological identification for the employees in relation to their work, when they feel that their value and contributions are being acknowledged, which are the main components of job involvement (Li et al., 2019; Robbins et al., 2019). While no studies came to light on the direct relationship between employee voice and employee involvement, researches have been conducted that support our notion. Rubbab and Naqvi (2020) postulated that through the acceptance of employee voice in the workplace, it increases the likelihood of inclusion which fosters employee involvement. Thus, when employees do feel that their voice is welcomed, they would be more likely to be involved in their jobs.

What came as a surprise were the results of the third hypotheses which claimed that digitally-enabled employee voice does not lead to innovative work behavior (H3). This goes against the studies done by multiple researchers that previously found a direct link between voice and innovative work behavior (Shin et al., 2022). Likewise, in their study Shin et al. (2022) also suggested that voice practices are deemed as HRM practices that are specifically made for employees to achieve innovation in the workplace. While work done by authors such as Chen & Huang (2009) and El-Kassar et al. (2022) both embraced this stance by revealing through their research on how HRM practices lead to innovative work behaviors.

Giving employees a digital platform where they can share their recommendations and opinions boosts their ambidexterity and involvement, but it does not increase their innovative work behavior. There are several reasons why there was no direct relationship established between the two constructs in this investigation. Throughout the research, a key point that emerged during

any discourse on employee voice was that the employee must be motivated to speak up and share their ideas. Research done by Shepherd et al. (2019) and Tucker and Turner (2015) both found that employees who were prosocially motivated and had ideas about improvement were more willing to voice out suggestions and concerns. Therefore, it can be assumed that a lack of motivation to voice their input could be a reason as to why there was no relationship between digitally-enabled employee voice and innovative work behavior.

Another element worth addressing is the notion of idea sharing vs idea repetition. Employees often do not feel the need to engage in any type of voice behavior when they believe that a particular aspect has already been addressed by someone else and that their opinion will be perceived as redundant and unoriginal rather than innovation. Hussain et al. (2019) investigated this notion as well, discovering that employees who feel that the knowledge they hold has already been shared by others are less likely to speak out, as this view reduces their sense of responsibility for speaking up. Morrison (2023) added to this by stating that only when employees think they have unique and relevant information would they be prepared to engage in voice, making this a necessary prerequisite for employee voice and its possible outputs, which in this case is innovative work behavior.

In a similar spirit, when delving deeper into the reasons why digitally-enabled employee voice had no impact on innovative work behavior, gender disparities may have played a role that must be acknowledged. There is no surprise that there is a gender inequality issue in the workplace in Pakistan. Multiple studies have been conducted to support this perspective, including those conducted by Sherf et al. (2017), Taiyi Yan et al. (2022) and Eibl et al. (2020), which have further investigated the influence of gender in employee voice.

Similarly, employee ambidexterity was also seen to have a significant relationship with innovative work behavior, as hypothesized (H4). These findings concur with the research done by Rosing and Zacher (2017), that found a relevant link between individual ambidexterity and innovative performance and the systematic review by Kumalaningrum et al. (2023) that found multiple discussions based on ambidexterity and its impact on innovative performance which has been defined as the adeptness of an individual’s behaviors towards achieving innovative

outcomes. The process of using both exploration and exploitation is seen as a central trait for innovation where employees using their abilities are able to experiment with new ideas while simultaneously working to refine and align their current goal to achieve innovative behaviors (Malik et al., 2017b; Raisch et al., 2009; Raisch & Birkinshaw, 2008). In other words, ambidexterity allows employees to expand their knowledge and obtain a broader perspective on things, allowing them to look at their current resources and work on ways to better them via continuous acts of experimentation and discovery. This strategy enhances the possibility of employees implementing innovations, leading to innovative work behaviors.

Much to our liking, employee involvement was also found to have a direct link with innovative work behavior (H5). This means that those employees who are found to be more involved in their jobs would have a higher inclination towards innovative work behaviors. This argument is also supported by the fact that since innovative work behavior is not formally a part of an employee's job requirement, employees don't necessary feel the need to exhibit IWB unless they themselves are willing to (Huhtala & Parzefall, 2007; Kundu et al., 2019). Which means that employees who are personally involved in their jobs would be more motivated to engage in innovative work behaviors. The results of the study also prove Brown (2007) notion that stressed the importance of employees involvement for innovative work behavior. Previously researches such as, Kundu et al. (2019), Huang et al. (2019), Peng (2020) and Sulistiasih & Widodo (2022) all found employee's job involvement to positively impact innovative behavior. Thus there is no surprise to the result of our hypothesis as well, that such employees who are highly involved in their work, go above and beyond their call of duty (Afsar et al., 2021) .

Employee ambidexterity was also found to successfully mediate the relationship between digitally-enabled employee voice and innovative work behavior (H6). The findings have the support from previous studies that have used ambidexterity as a mediator in their research. Work such as that done by Dedering & Pietsch (2023) explored the mediating role of individual exploration and exploitation as components of ambidexterity, Rui et al.,(2023) studied the mediating effect of social network ambidexterity to achieve innovation performance, Sharif et al., (2022) found ambidexterity to positively mediate the relationship between knowledge coupling and innovation performance of SMEs, while Ijigu et al., (2022) found that

employee ambidexterity was seen to partially mediate the relationship between a high-performance work system and employee work performance. To the best of our understanding, the entire body of research has led us to the conclusion that employees need to take advantage of opportunities that give them a voice in decision-making and participation in processes if they are to engage in innovative work behaviors. With employee ambidexterity mediating the connection, it sanctions employees to utilize their voice platforms not only to develop new ideas but also to enhance and refine existing ones, resulting in innovative behaviors to achieve results.

Likewise, employee involvement was also seen to partially mediate the relationship between digitally-enabled employee voice and innovative work behavior (H7). This goes in line with previous research that had contended a link between employees' participation and voice practices to play a pivotal role in achieving innovation in the workplace (Azevedo et al., 2021). In a similar context Shin et al. (2022), in their research also postulated that innovative problem-solving and creation can be achieved through participation, mediating between voice practices and organizational innovation. Employees involvement in their job has also been studied as a mediator in many other researches as well, such as the study by Huang et al. (2019) in which job involvement successfully mediated the relationship between person-job fit and innovation behavior on China's IT workers. Similarly, Jyoti et al. (2021) and Mikkelsen & Olsen (2019) also found job involvement as a successful mediator in their research, while employee's job involvement was found to only partially mediate in a study by Ćulibrk et al. (2018). This means that by enabling participation of employees, it cultivates them into a process of idea generation and delving into sharing their ideas and information with others (Kesting et al., 2016), in extension, engaging in voice behavior and using that to develop an innovative sense to their work behavior.

In regards to the moderating variable, organizational agility did not moderate the relationship between employee ambidexterity and innovative work behavior (H8) as well as employee involvement and innovative work behavior (H9). The results of the hypothesis (H8) showed us that the relationship has a negative B value indicating rather a weak or negative effect of organizational agility on employee ambidexterity and innovative work behaviour, thus reducing the strength of their relationship. Whilst the results of the hypothesis (H9) displayed that having

an agile organization clearly had no impact on the relationship between the employees' involvement and their innovative work behavior in the telecommunication sector. While these results went against our better judgement, in the research conducted by Darvishmotevali et al. (2020), organizational agility was also not seen to moderate the relationship between market uncertainty and organizational creativity.

In their recent paper, Elazhary et al. (2023) briefed upon how previous researches had described organizational agility as a manifestation of higher-order organizational capabilities, which generously allows organizations to manage their resources and create value in an effective and efficient manner. In a similar context previous researchers have also contended on how organizational agility provides companies to not only counter unexpected circumstances but also reshape the processes and resources and gauges them into taking opportunities, risks and discovering new avenues that allows them to innovative (Ahmadi & Ershadi, 2021; Al-Omoush et al., 2020; Arsawan et al., 2022; Awwad et al., 2022; Nafei, 2016; Zhou et al., 2018; Žitkienė & Deksnys, 2018).

In the case of this study, this means that while having organizations that are proactive and flexible enough to thrive in unpredictable environments and provide their employees with the resources and capacities to delve into new ideas and respond to changes being made to the already existing resources is seen as a plus point by most employees, in this case, it could mean that it creates unprecedented pressure on the employees to step up and be prepared for changes in the workplace on a constant basis. In light if this, we can infer that the relationship is weakened or diminished, and individuals are unable to fully exploit their ambidextrous abilities and achieve innovative work behaviors.

Masilamani and Suresh (2021) also noted in their research that failing to deal with tumultuous or challenging circumstances in the suitable manner could result in the loss of business chances as well as hampered revenue and growth in the long term. Accordingly, we can derive that when the stakes are high, it fosters an uncertain and tense work environment for employees to engage in any type of work that is required for innovative work behavior. As a result, in order to avoid risks and causing damage to the organization, employees are less likely to seek out opportunities

to explore and exploit their given resources, and they are less likely to become involved in cases that would allow them to behave in an innovative manner, and they are more likely to stick to their monotonous route.

Similarly, regardless of the fact that the organization is agile in providing the right resources and coming up with effective and efficient strategies to counter the turbulent business environment, an employee who is involved in their jobs, would exude the same level of behaviors required for innovate work**.** Hence as job involvement is a psychological phenomenon that has considerable importance in an employee's life (May et al., 2023), factors such as organizational agility will be less likely to impact their relationships with their desired behaviors.

Apart from that, organizational agility has enabled organizations to control and adapt to sudden environmental changes, manage activities in uncertain environments through adaptation and flexibility, and respond quickly and effectively to changes in the surrounding work environment (Alalmai, 2021; Devie et al., 2023). For some employees, this might imply feeling continually micromanaged by their organizations and their superiors directing how they should do their jobs. As a result, without the feeling of freedom to innovate, and organizations stifling any sort of experiments employees can conduct to explore new ideas and take risks, employees are further discouraged from getting involved in their organizations and from using their ambidextrous abilities to engage in any innovative behavior at work. Another possibility could be that in the struggle to keep up with changing market needs, employees become lost in retrospect, leading to uncertainty and a lack of clear direction. With multiple projects, changing priorities, and handling numerous tasks at the same time, employees may struggle to successfully balance their ambidextrous activities and be efficiently involved in workplace innovative behavior.

Furthemore, Joiner (2019) identified that there is a significant disparity between how an agile organization needs to function versus prevailing leaders practices. Concurrently, Werder et al. (2021) also discovered that, despite continued study attempts to elucidate the concept of agility, organizations still are unable to reap its benefits. In light of this, it is clear that ineffective leadership practices and misalignment of practices it terms of what is desired versus what is delivered, can foster employee uncertainty and apprehension, impeding their ability to leverage

their organization's adaptable capacities for the purpose of exploring and capitalizing on novel opportunities, thereby hindering the development of innovative work behaviors.

Likewise, as researched, job involvement requires an internal drive from employees and is built on the positive self-image they have of themselves through identifying with their tasks (Agarwal et al., 2022). Previous research has also pointed out the pivotal role of employee's involvement in fostering innovative work behavior (Busch-Casler et al., 2021; Kundu et al., 2019). As a result, when employees are engaged in their work, they are better able to recognize it as an important prospect (Maamari & Osta, 2021) and hence are better able to produce positive behaviors and outcomes. On this premise, we may conclude that, despite its importance in the ever-changing work dynamics, organizational agility has little influence on how managerial workers' involvement translates into them engaging in innovative work behaviors.

This study also utilized self-determination theory to further explain the relationships in the research. Based on the theory, employees who are seen to actively participate in employee voice are not only seen as more competent and influential, but also the way they are able to have a say in matters, provide constructive changes and challenge the status quo (Li et al., 2022; McClean et al., 2018; Ng & Feldman, 2012; Weiss & Morrison, 2019; Whiting et al., 2008), speaks volumes to how they would be better able to achieve their desired outcomes when their psychological needs are met. The extent to which employees are able to use their digital platforms to make suggestions and raise issues provides them to add value to the organization (Li et al., 2022), this acknowledgement of being considered as a value to the organization fulfils their psychological needs of autonomy, relatedness and competence and thereby results in positive employee behavior and employee work-related outcomes.

5.3 Theoretical Contributions

To the best of our knowledge this is the first study that investigated the impact of digitally-enabled employee voice on ambidexterity, involvement and innovative work behavior on an individual level. While previous studies had either directly or indirectly mentioned a positive impact of voice on these variables, it had been on an organizational or team level. Therefore, bringing in the concept of having digital voice mechanisms added to the recent and infant

literature of digitally-enabled employee voice. More specifically, our study studied employee voice in the context of digital employee voice rather than the traditional voice structure. While previous research such as that of Kim and Leach (2020), used a more anonymous approach to digitally-enabled employee voice, our study focused on the direct face-face interaction of employees using digital channels of employee voice. Therefore, this study contributes significantly in revealing the favorable impact of employees using their voice in a digital environment, a gap brought to light by Rahmani et al. (2023), who noted a visible absence of studies in deciphering whether a digital environment was more favorable when it comes to expressing opinions and suggestions compared to in-person environments.

Likewise, using ambidexterity on an individual level allowed us to significantly contribute to its nascent literature. It further supported the claims by prominent researchers who provided evidence of the importance of ambidexterity outside of organizational levels and from the perspective of the employees and how it can lead to positive outcomes and gave a call for attaining greater insight into this aspect (Bonesso et al., 2014; Caniëls et al., 2017; Mom et al., 2009; O'Reilly & Tushman, 2011; Swart et al., 2019). Furthermore, although employee voice has time and time again seen to be positively associated with innovative behavior (El-Kassar et al., 2022; Sifatu et al., 2020), this study found that it was not the case with the managerial employees of the telecom sector in Pakistan. These results displayed the opposite of what was hypothesized for the research and thereby added a valuable contribution to the scant investigation untaken for this particular relationship.

Additionally, the results of the presented further contributed to the almost repetitive literature of employee involvement and added value to it by exploring it as more than just antecedents of job satisfaction and engagement (Philip & Arrowsmith, 2020). It explored employee involvement to be a significant contributor to innovative work behavior, as well as was able to partially mediate the relationship between digitally-enabled employee voice and innovative work behavior. Moreover, the present study also employed the use of organizational agility as a moderator between the relationships of ambidexterity and involvement with innovative work behavior. While it contributed to the lack of substantial research on the subject as a moderator, the results displayed the variable having no impact on the relationship of both employee ambidexterity and

employee involvement with innovative work behavior. This has opened many more research avenues for future researchers.

Lastly, this study leveraged the contribution of self-determination theory in understanding the proposed relationships. Most theories that had been associated with employee voice were grounded in social exchange theory (SET) (Farndale et al., 2011; Ng et al., 2014; Prouska et al., 2023; Zhang et al., 2022; Zhu et al., 2022). Therefore, adding self-determination theory to the research brought about a fresh outlook and added to the theoretical contributions by viewing employee voice through a lens of motivation stemming from the employee itself in achieving the desired outcomes.

5.4 Practical Implications

Beyond the theoretical contributions, our study provides a number of meaningful practical implications for practitioners and organizations of the telecommunication sector. In this rapidly evolving business environment, organizations need to involve HR practices that will provide them with innovation and market success to remain competitive. Our results suggest that digitally-enabled employee voice has a significant influence on employee's ambidexterity and their involvement. To enhance this, organizations need to expand their horizons on what they think employee voice entails, and remove any sort of barriers or preventions they have that might hinder employees from speaking up (Yin et al., 2022). Top executives need to set examples of involving employees in decision-making through acknowledging their participation and voiced out suggestions and ideas. Furthermore, since ambidexterity involves both exploration and exploitation, companies need to utilize the current era of technological innovations and provide their employees with the resources and tools that would help them not only decipher new ways to improve their current systems and procedures but also will provide them new ways to access new knowledge and avail opportunities, that will increase their levels of ambidexterity. Similarly, by expanding the digital voice forums they can incorporate idea, digital learning and development and feedback forums, where employees will be able to participate on on-going projects, exchange ideas and receive feedback in real-time. This will lead to both higher levels of ambidextrous behavior and involvement. Moreover, giving opportunities for the expression of voice would also instill a sense of competence and confidence in employees which would enable

them to take on numerous challenges and projects. By encouraging open dialogue, organizations would be able to utilize these digital platforms to iterate broader perspectives with more diverse inputs from employees.

However, the results also are a cause for concern seeing how digitally-enabled employee voice was seen to have no impact on innovative work behavior of the managerial employees. Organizations need to understand that giving employees the voice in companies does not mean that employees have the freedom to do whatever they want. Freedom of speech does not entail opportunities to take out frustrations against the company and display any sort of negative behavior, rather digital employee voice provides employees a seamless way to promote innovativeness and creativity through integrating their ideas and having the autonomy to be a part in decision making. Literature has shown us that having a platform to voice leads to better engagement from employees, more job satisfaction, greater performance and reduced turnover. Therefore, companies need to incorporate mechanisms that will foster employees innovative work behavior such as establishing learning platforms that can help employees figure out how to use their voice platforms effectively and transform their thoughts and ideas into innovative behavior to yield out positive results.

In a similar context, seeing how both employee ambidexterity and employee involvement were seen to have significant impact on innovative work behavior, organizations need to avail this opportunity to augment a culture of learning and development that lets employees gain extensive knowledge both internally and externally for them to be able to carry out processes, refine current projects and procedures and also use their skills and knowledge to carry out innovative behaviors that would go on to produce fruitful outcomes from companies. Research has time and time again shown us how ambidexterity and involvement of employees yields out effective long term performance, engaged employees, a prosperous and competitive business (Brix, 2019). For this very purpose, companies should provide extensive resources to their employees, such as having platforms for co-creation of innovative projects, that would allow collaboration amongst different individuals from different departments. Similarly, conducting workshops and having seminars to help employees share insight, learn project management and problem-solving skills,

develop new skills and abilities, leading to more ambidextrous and involved employees, who would foster innovative behavior in the workplace.

There is no surprise that digitally-enabled employee voice would be a game changer from any company that welcomes it with an open mind. Thus, the telecommunication companies need to leverage these platforms in order to unlock the full innovative potential of their employees. Through showcasing less resistance towards gaining input from management in decision-making, top executive would be allowing employees to engage in exploring and exploitative behaviors', and become more involved, that would result in more innovative behaviors on the employees' end. Similarly, research has consistently shown us that an organizations that has a culture of embracing and supporting change and improvements are prone to having greater innovative work (Avby et al., 2019), thus organizations must also adopt a culture that embraces ideas as well as collaborations with employees for the advancements and improvements in their systems and procedures.

Lastly, agility plays a crucial role for organizations especially this in this turbulent economy. Organizations need to provide employees with the resources and empowerment so that they can learn the necessary knowledge, skills and abilities required to achieve innovate behaviors (Darvishmotevali et al., 2020). Therefore, when HR practitioners develop different managerial strategies that invokes a sense of innovativeness amongst their employees, organizations need to be agile enough to support and implement those strategies and policies during dynamic and uncertain environments. Becoming agile would not only give organizations the competitive edge over other telecom companies but would also provide them the support of bringing about innovative change during a time of need. It would give them the ability to effectively respond to uncertainties, organize and create value for organizations to remain competitive (Franco et al., 2022).

5.5 Limitations and Future Recommendations

Like every research, this study also did not come without its limitations. First, this study used a self-administered questionnaire following a cross-sectional research design to gather data from the managerial employees working in the telecommunication sector at one point in time. The self-administered approach may have contributed to employees having some biasness in their

answers. Hence, future researchers should approach it with a longitudinal design bringing about more stability and consistency in the data collected and allowing for more accurate results with a greater chance of reduced bias.

Second, this study solely focused on the telecommunications industry of Pakistan. Future researchers might duplicate the research model and explore it in other industries such as IT or hospitality to cultivate a deeper understanding on how digital employee voice effects these characteristics in other work contexts. Similarly, the findings may be replicated in other developing countries that will enable us to acquire more profound insight of the variations in outcomes that each industry and nation has, adding to the complexity of the model.

Third, the findings of the study indicated that digital employee voice had no impact on innovative work behavior. Therefore, future studies should consider the demographic variables such as gender, age and education etc. as control variables in order to rule out the explanations of the findings. Likewise, the present study also invoked the help of organizational agility as a moderator in the relationships between employee ambidexterity and involvement with innovative work behavior. Seeing how organizational agility did not moderate any of the relationships with innovative work behavior, future studies may research this intriguing area with other moderators' such as organizational culture, perceived organizational support or climate for innovation to yield out possible effects they can have on these relationships. Moreover, employee involvement only had a partial mediating effect on the relationship between digitally-enabled employee voice and innovative work behavior. Future studies may use other mediators such as employee engagement, psychological safety, employee self-efficacy etc. to investigate what outcomes come forth.

5.6 Conclusion

The aim of this research was seek out positive outcomes and behaviors when employees are provided with digital voice mechanisms that are focused on real-time, face to face interactions in a digital space. The study differed from traditional voice channels and anonymous voice structures by allowing employees to feel at ease and confident in an online environment and allowing organizations to evaluate how these digital voice mechanisms generate positive results.

As a result, this study went on to investigate the impact of digitally-enabled employee voice on employee ambidexterity, employee involvement, and innovative work behavior, using mediators to gain further insight into the mechanisms that help employees use their digital voice in achieving innovative work behavior, as well as organizational agility as a moderator in the study. The research focused on managerial employees working in the telecommunication sector of Pakistan. With 222 responses collected from the data collection, SPSS and SmartPLS were used to generate results of the proposed hypotheses. The results revealed that digitally-enabled employee voice had a positive relationship with employee ambidexterity and employee involvement. However, it failed to have an influence on their innovative work behavior. Moreover, both employee ambidexterity and employee involvement were seen to have a significant impact on innovative work behavior. Along with both of them proving to be successful mediators in the relationship between digitally-enabled employee voice and innovative work behavior. In addition to that, organizational agility failed to achieve any success on the relationship of employee ambidexterity and employee involvement with innovative work behavior. The results of the study provide a number of significant theoretical contributions along with numerous practical implications for practitioners and organizations. This research has also opened up several avenues for future researchers and scholars.

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7 Appendix

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Digitally-Enabled Employee Voice and Innovative Work Behavior

Dear Participant,

The focus of the research is on the management level employees working in the telecommunication sector of Pakistan, therefore, I am inviting you to participate in this study by completing the attached survey.

The survey will take approximately 5-6 minutes to fill. There is no compensation for responding nor is there any known risk. All provided information will remain confidential. If you choose to participate in this research, please answer all questions as honestly as possible. Participation is strictly voluntary and you may refuse to participate at any time.

Thank you for taking the time to assist me in my educational endeavors. Completion of the questionnaire will indicate your willingness to participate in this study.

Questionnaire

1.	**Gender?** □ Male□ □ Female □ Rather not say

2.	**Age?** □ 20 to 30 years □ 31 to 40 years □ □ 41 to 55 years □ Above 55 years
3.	**Education?** □ High school Diploma □ Undergraduate □ Masters □ Other
4.	**City: _____**
5.	**Do you currently work in telecommunication sector of Pakistan? □** □ Yes □ No
6.	**Current Position (e.g. Manager)** □ Senior Manager □ Manager □ Assistant Manager □ Other
7.	**Years of Experience (in current organization): _____**

SECTION A: Demographics

SECTION B

Please select the appropriate choice against each statement to indicate the extent to which you agree.
1 = Strongly Disagree (SDA), 2 = Disagree (DA), 3 = Neutral (N), 4 = Agree (A),
5 = Strongly Agree (SA)

For the table below, the term "digital voice channels" refer to virtual meetings, emails, organizational forums, employee chat boxes, online surveys etc.

Digitally-Enabled Employee Voice	SDA (1)	DA (2)	N (3)	A (4)	SA (5)
1. Through the use of digital voice channels I am able to proactively develop and make suggestions for issues that may influence the organization.	1	2	3	4	5
2. Through the use of digital voice channels I am able to proactively suggest new projects which are beneficial to the organization.	1	2	3	4	5
3. Through the use of digital voice channels I am able to raise suggestions to improve the organization's working procedure.	1	2	3	4	5
4. Through the use of digital voice channels I am able to proactively voice out constructive suggestions that help the organization reach its goals.	1	2	3	4	5
5. Through the use of digital voice channels I am able to make constructive suggestions to improve the organization's operation.	1	2	3	4	5
6. Through the use of digital voice channels I am able to advise other colleagues against undesirable behaviors that would hamper job performance.	1	2	3	4	5

7. Through the use of digital voice channels I am able to speak up honestly with problems that might cause serious loss to the organization, even when/though dissenting opinions exist.	1	2	3	4	5
8. Through the use of digital voice channels I dare to voice out opinions on things that might affect efficiency in the organization even if that would embarrass others.	1	2	3	4	5
9. Through the use of digital voice channels I dare to point out problems when they appear in the organization even if that would hamper relationships with other colleagues.	1	2	3	4	5
10. Through the use of digital voice channels I am able to proactively report coordination problems in the workplace to the management.	1	2	3	4	5

Employee Ambidexterity	**SDA (1)**	**DA (2)**	**N (3)**	**A (4)**	**SA (5)**
1. In my current organization, I am engaged in searching for new possibilities with respect to products/services, processes or markets.	1	2	3	4	5
2. In my current organization, I am engaged in evaluating diverse options with respect to products/services, processes or markets.	1	2	3	4	5
3. In my current organization, I am engaged in focusing on strong renewal of products/services or processes.	1	2	3	4	5
4. In my current organization, I am engaged in activities requiring quite some adaptability of myself.	1	2	3	4	5
5. In my current organization, I am engaged in activities requiring myself to learn new skills or knowledge.	1	2	3	4	5
6. In my current organization, I am engaged in activities of which a lot of experience has been accumulated by me.	1	2	3	4	5
7. In my current organization, I am engaged in activities which serve existing (internal) customers with existing services/products.	1	2	3	4	5
8. In my current organization, I am engaged in activities of which it is clear to me how to conduct them.	1	2	3	4	5
9. In my current organization, I am engaged in activities primarily focused on achieving short-term goals.	1	2	3	4	5
10. In my current organization, I am engaged in activities which I can properly conduct by using my present knowledge.	1	2	3	4	5

11. In my current organization, I am engaged in activities which clearly fit into existing company policy.	1	2	3	4	5

Employee Involvement	SDA (1)	DA (2)	N (3)	A (4)	SA (5)
1. The most important things that happened to me occurred in my current job.	1	2	3	4	5
2. To me, my current job is only a small part of who I am.	1	2	3	4	5
3. I am very much involved personally in my current job.	1	2	3	4	5
4. I live, eat and breathe my current job.	1	2	3	4	5
5. Most of my interests are centred around my current job.	1	2	3	4	5
6. I have very strong ties with my current job which would be very difficult to break.	1	2	3	4	5
7. Usually I feel detached from my current job.	1	2	3	4	5
8. Most of my personal life goals are job-oriented.	1	2	3	4	5
9. I consider my current job to be very central to my existence.	1	2	3	4	5
10. I like to be absorbed in my current job most of the time.	1	2	3	4	5

Innovative Work Behaviour	SDA (1)	DA (2)	N (3)	A (4)	SA (5)
1. In my current organization, I often pay attention to issues that are not part of my daily work.	1	2	3	4	5
2. In my current organization, I often wonder how things can be improved.	1	2	3	4	5
3. In my current organization, I often search out new working methods, techniques or instruments.	1	2	3	4	5
4. In my current organization, I often generate original solutions for problems.	1	2	3	4	5
5. In my current organization, I often find new approaches to execute tasks.	1	2	3	4	5

6. In my current organization, I often make important organizational members enthusiastic for innovative ideas.	1	2	3	4	5
7. In my current organization, I often attempt to convince people to support an innovative idea.	1	2	3	4	5
8. In my current organization, I often systematically introduce innovative ideas into my work practices.	1	2	3	4	5
9. In my current organization, I often contribute to the implementation of new ideas.	1	2	3	4	5
10. In my current organization, I often put effort in the development of new things.	1	2	3	4	5

Organizational Agility	**SDA (1)**	**DA (2)**	**N (3)**	**A (4)**	**SA (5)**
1. My current organization has the ability to rapidly respond to customers' needs.	1	2	3	4	5
2. My current organization has the ability to rapidly adapt production to demand fluctuations.	1	2	3	4	5
3. My current organization has the ability to rapidly cope with problems from suppliers.	1	2	3	4	5
4. My current organization rapidly implements decisions to face market changes.	1	2	3	4	5
5. My current organization continuously searches for forms to reinvent or redesign the organization.	1	2	3	4	5
6. My current organization markets changes as opportunities for rapid capitalization .	1	2	3	4	5

Thank you for taking the time out to fill the questionnaire and participate in my study.