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Digital Leadership and Digital Transformation: The Role of Change Readiness, Person-Organization Fit, and Person-Job Fit

Muhammad Tasnim Khan [1], Nabila Asghar[2], Hafeez ur Rehman[3], Iqra Abbas[4]

[1] Dr. Hasan Murad School of Management, University of Management Technology, Lahore, Pakistan. Email: tasnim.khan@umt.edu.pk
[2] Associate Professor, School of Economics, University of the Punjab, Lahore, Pakistan. Email: nabila.eco@pu.edu.pk
[3] Department of Economics and Quantitative Methods (HSM), University of Management Technology, Lahore, Pakistan. Email: hafeezurrehman@umt.edu.pk
[4] Dr. Hasan Murad School of Management, University of Management Technology, Lahore, Pakistan. Email: iqrasindhu86@gmail.com

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ABSTRACT

Technological artificial intelligence and digitalization are rapidly transforming business environments across the globe, compelling organizations to reassess their strategies, structures, and leadership approaches. In this context, the present study examines the impact of two critical leadership styles, digital leadership (DL) and digital transformational leadership (DTL), on the process of digital transformation (DT) within organizations, specifically through the mediating role of change readiness (CR). Furthermore, this study explores the moderating effects of person-organization fit (POF) and person-job fit (PJF) on these relationships. To analyze these relationships, researchers targeted the information and communication technology (ICT) industry in Pakistan. The study targeted 150 ICT firms, and survey-based questionnaires will be implemented with 350 employees. Researchers employed SmartPLSv4.1.1.2 to analyze first-hand survey-based data. Grounded in transformational leadership theory (TLT), the findings are expected to reveal that DL and DTL significantly contribute to building a robust organizational culture that is conducive to digital transformation. Moreover, CR plays a critical mediating role, highlighting the psychological and behavioral preparedness of employees to embrace digital initiatives. Moreover, POF and PJF play a moderating role and boost the impact of CR on DT. Finally, this research emphasized theoretical and practical implications and ensured that these efforts are crucial to sustain innovation, competitiveness, and long-term success in the digital era.

Corresponding Author's Email: tasnim.khan@umt.edu.pk

1. Introduction

According to Jack Welch (1935-2020), when the rate of change inside the organization becomes slower than the rate of change outside, the end is near. With the current rapid evaluation in the digital landscape, organizations are changing due to digital transformation (DT) technologies (Nasiri et al., 2020). With the integration of the digital era, artificial intelligence, blockchain, customer demands with dynamics change, most of organization face significant challenges to operationalized change after disturbances stemming from COVID-19(Li et al., 2022). The digital era has also propelled technology to change progress and is directly associated with the ICT industry (Farheen et al., 2023). The DT is significantly associated with the development and reconfiguring patterns of the ICT industry (McCarthy, Sammon, & Alhassan, 2022; Senadjki et al., 2024). In the digital landscape ear, the DT is a compulsory factor for the ICT (Chen & Zhang, 2024), give its pivotal role in driving organizational change and shaping the digital landscape. ICT sector in Pakistan has grown due to trade and investment, liberalization, favorable policies, and healthy competition. It generated a trade surplus of $1.7 Billion in the year 2023 (Pakistan, 2020; Rehman et al., 2021). Despite an apparent agreement, it still faces

many challenges around its usage and development process. There seems to be no human intervention due to autonomy in many causes, unfair decisions due to poor leadership, resistance to change, misuse due to malevolent actors, and inefficient use of technology. These problems are at the forefront of research by academia and business organizations.

In today's rapidly evolving digital landscape, companies have identified the significant role of digital leadership (DL) in investigating complex problems that drive DT change (Chen & Zhang, 2024). According to previous studies, DL includes the ability to bind technologies evolve innovation, and lead effectively in a digital environment (Zhu et al., 2022). On the other hand, digital transformational leadership (DTL) explains a strategic approach to leadership that most focuses on changing the organizational environment utilization of digital technologies. So, it also leads to effective cultural innovation and adaptability (AlNuaimi et al., 2022). According to McCarthy, Sammon and Alhassan (2022) those leaders who embody DTL qualities are adept at leveraging digital resources and tools to create new opportunities and enhance innovation and organizational agility (Chen & Chang, 2013). Therefore, DTL has been introduced to influence business innovation in digital landscapes. Despite these difficulties, many organizations cannot be successful with DT due to incompatible leadership styles and organizational changes without building plans (Aboobaker & KA, 2021). Leaders must ensure organizational change and recruit talented and valuable individuals by selecting organizational and job-related fit employees(Pettigrew, Woodman, & Cameron, 2001). Therefore, this study identifies the research gap and combines these factors that could influence DT outcomes in the ICT industry and contribute to organizational success (Rusly, Corner, & Sun, 2012). Therefore, this study has several aims, first, investigate the relationship between change readiness (CR) and two leadership styles (DL &DTL) including this association's impact on DT (Chen & Chang, 2013; Gigliotti et al., 2019). The second aim of this study is to investigate any positive moderation effect of POF and PJF between the CR and DT relationship. However, researchers draw a transformation leadership theory (TLT) to conceptualize the model and these relationships.

In addition, the importance of CR and its impact on DT can depend on individual characteristics. These characteristics are the interpersonal compatibilities between employees and members of their working firms(Kristof-Brown, Zimmerman, & Johnson, 2005). Given the rapid change and growing competition for talented individuals, investigate the person-organization fit (POF) impact on employee readiness to change. Consequently, researchers use POF (Hoffman & Woehr, 2006) and person-job fit (PJF)(Sekiguchi, 2004) as moderator variables. In this study, the POF refers to employees' values, beliefs, and goals. However, PJF relates to their skills, abilities, performance, and requirements of the job role(Sekiguchi, 2004). So, the poorer PJF is directly associated with a lower level of well-being regarding organizational readiness for change(Kristof-Brown, Zimmerman, & Johnson, 2005). It can generate boredom, irritation, anxiety, and somatic complaints. Therefore, researchers investigate how these moderator variables can provide valuable insights and perform as a multiplier between CR and DT outcomes. Additionally, leaders enhance the values of individuals and recruit talented employees in their organization. By investigating these relationships, the study conceptualized the model of how DT, DTL, and CR impact DT outcomes (Farheen et al., 2023). This study seeks to provide actionable insights that can inform leadership practices and drive organizational excellence in the digital era (Chen & Zhang, 2024; Chen & Chang, 2013).

According to the researcher's understanding, there is a significant research gap in the underlying mechanism through which these leadership styles impact DT outcomes. Specifically, it provides a ground for empirical research for investigating the association between DT, DTL, CR, and DT outcomes, particularly within the context of the ICT industry. However, in this industry, the level of complexity, uncertainty, and dynamism is even at a higher level as compared to other industries. Moreover, past studies explored the impact of DTL as an individual factor on DT (AlNuaimi et al., 2022). There are limited studies that explore the relationship of DT with two leadership styles altogether(McCarthy, Sammon, & Alhassan, 2022). Besides, POF and PJF is used as individual bases in influencing organizational outcomes (Woerkom et al., 2024; Zhu et al., 2022). Meanwhile, few studies investigated the moderating effects of these variables on CR and DT outcomes within the ICT industry (Aboobaker & KA, 2021). Therefore, the issue is identified by this research gap and it is need to investigate the relationship between these emerging leadership styles and DT outcomes with considering the moderating role of two moderator variables in ICT industry. This research expands the antecedents of stated variables

and provides more empirical evidence for researching change readiness, POF, and PJF as mediator and moderator variables. This can help leaders in the ICT industry formulate more effective strategies to navigate the complexities of the digital era and drive successful DT initiatives. Building on the transformational leadership theory as a theoretical underpinning, this study expands on DL, DTL, change readiness, and DT literature by covering the theoretical and empirical gap. It also explains how these leadership behaviors positively impacted DT outcomes. Second, how to change readiness make a bridge between these leadership styles and DT outcomes? Third, this study contributes to the literature by empirically and theoretically investigating the direct effect of DL, and DTL on DT, and the indirect relationship on DT by change readiness.

2. Literature Review

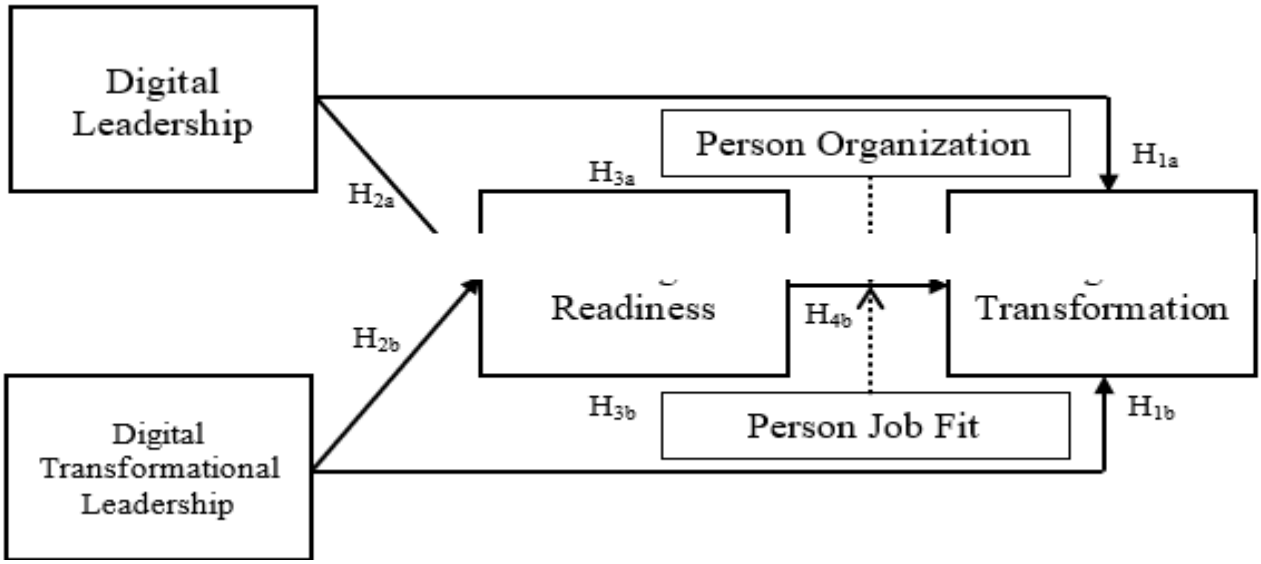
The digital transformation plays a vital role in teaching organizations as well as digital technologies, business, reshaping and digitalizing business operations, customer interactions to enhance efficiency, and digital strategies. It includes both cultural and technological change to adopt a dynamic and rapidly evolving digital environment (AlNuaimi et al., 2022; McCarthy, Sammon, & Alhassan, 2022). Digital technologies include mobile, blockchain, artificial intelligence, and internet-related things, and play a significant description in every organization, promoting firms to adopt digital transformation to compete and dominate the market (McCarthy, Sammon, & Alhassan, 2022). DT is paramount for organizations operating in the ICT industry as it enables them to remain competitive, innovative, and resilient in the digital age (Senadjki et al., 2024). The importance of DT lies in using the output of digital technologies to decrease the confines of complex business environments (Lv et al., 2024). Ultimately, DT is essential for organizations to thrive and succeed in an increasingly digitized world. DL plays a pivotal role in driving DT initiatives within organizations operating in the ICT industry (Senadjki et al., 2024). To the successful implementation of DT, it is very important to updated and strengthen vital job resources such as DL (Zeike et al., 2019). DL refers to abilities to guiding individuals through DT by leveraging technologies, enhancing innovation, and aligning digital strategies with business goals (Zhu et al., 2022). According to the present literature, DL uses its qualities of foresight, insight, and creative thinking they empower employees, champion digital initiatives and fostering a culture of innovation (Zhu et al., 2022). Therefore, DL is instrumental in catalyzing and sustaining DT efforts, enabling organizations to remain agile, competitive, and resilient in today's rapidly evolving digital environment.

After the COVID-19 global pandemic era, the DTL generate significant intention for potential researchers. Because the previous COVID-19 accelerating the pace of DT within all types of organizations. Therefore, these organizations are struggling to adapt DT along with digital urgency (McCarthy, Sammon, & Alhassan, 2022). So, DTL plays a crucial role in inspiring vision and providing strategic direction within organizations operating in the ICT industry. The DTL refers to guiding their followers by comprehensive driven technology change with integrating digital strategies across all functions. The main important focus of DTL is to inspiring innovation, aligning digital technologies with organizational objective and foster a workplace of adaptability to ensure successful DT (AlNuaimi et al., 2022; Ly, 2024). Moreover, DTL catalyzes organizational change, setting the strategic direction and mobilizing resources to realize the transformative potential of digital technologies within the ICT industry (Chen & Zhang, 2024). The CR is a most crucial part of DT. It is a continuous growing to copy with advance technologies with global market place which has resulted in accelerating environmental complexity (Aboobaker & KA, 2021). So, it is a critical determinant of successful DT initiatives within organizations. CR refers to how prepared and willing individuals or organizations are to embrace and implement changes. It consisting both mindset and capacity to change or adapted new technologies, process, smother transition and decreasing resistance(Aboobaker & KA, 2021). It ensures that the organization's culture, processes, and systems are conducive to embracing change and driving digital transformation effectively. The POF is compatibility between the organization and its individuals. POF documented that, it is the compatibility between organization and individual personality trades, such as values, skills, and preferences, self-motivation (Sekiguchi, 2004). When there is a high level of POF, employees feel a strong sense of alignment with the organization and are more likely to be committed to its goals and objectives. The PJF defined as an individual's personality traits such as skills, self-motivation, and knowledge, will reveal insight into their adaptability within an organization (Sekiguchi, 2004).

The transformational leadership theory (TLT) is a management sciences philosophy that refers to encourage the individuals for innovation and development and improve the way of an organization's future success environment (AlNuaimi et al., 2022; McCarthy, Sammon, & Alhassan, 2022). The TLT emphasizes the visionary and inspirational aspects of leadership, which are essential for driving digital transformation initiatives(Ragmoun, 2024; Ragmoun & Alfalih, 2025). DL and DTL, both rooted in this theory, embody the qualities of visionary thinking, empowerment, and innovation necessary for leading organizations through DT outcomes (Lv et al., 2024). In this study, researchers focus on personal individual trades that significantly influences for readiness to change by TLT paradigms(McCarthy, Sammon, & Alhassan, 2022). However, TLT acknowledges the leader's role in fostering organizational readiness for change. Leaders who exhibit transformational qualities inspire and motivate employees to embrace change, cultivate a culture of innovation, and prepare the organization for successful transformation efforts. The TLT is also perfectly supportive of the idea of POF and PJF for any individual (Kristof-Brown, Zimmerman, & Johnson, 2005). These variables are also motivational factors that encourage any individual to innovation and readiness to change which perfectly leads to DT (Zhang et al., 2024). This theory not only addresses the leadership aspect but also encompasses broader organizational dynamics, making it well-suited for studying the complex interactions among leadership, organizational readiness, and digital transformation processes.

2.1. Hypothesis Development

The proposed hypotheses are shown in Figure 1 below and subsequently explained.



2.2. Digital Leadership

The successful organizations embracing DT depending on several significant factors including the implementation of effective and efficient DL. DL, characterized by visionary thinking and strategic foresight, plays a pivotal role in driving DL within organizations (Senadjki et al., 2024). The ICT industry companies demand of rapidly changing technologies and adopt digital infrastructure for betterment of digitalization (McCarthy, Sammon, & Alhassan, 2022). Leaders who exhibit DL qualities possess a deep understanding of the digital landscape and its implications for the organization's future. The industry 4.0 era adaptability is a crucial skill for any employee (Zhu et al., 2022). By articulating a clear vision for digital change and aligning organizational goals with DT objectives, digital leaders inspire strategic alignment across departments and functions (Zeike et al., 2019). Besides, DL play a vital role in guiding complexity of DT outcomes(Wahid & Zulkifli, 2021). Their ability to communicate the strategic importance of DT fosters organizational buy-in, commitment, and collaboration, laying the foundation for successful implementation of digital initiatives. However, to achieve successful DT there is a need to implementation effective DL culture that reflects the abilities to deal with DT (Senadjki et al., 2024).Thus, visionary leadership serves as a catalyst for strategic alignment, driving organizational change towards digital transformation goals.

The process of digitalization depends on the capabilities of leader and their style. Positing a positive relationship between DL and CR suggests that effective DL within an organization

significantly influences its readiness for change (Senadjki et al., 2024). Previous studies demonstrate the positive association between leader capabilities and digitalization process. DL encompasses the ability of organizational leaders to navigate and leverage digital technologies to drive innovation, transformation, and organizational success (Rusly, Corner, & Sun, 2012; Zeike et al., 2019). The leader's digital capabilities can facilities development of employee's overall performance (Senadjki et al., 2024). Change readiness, on the other hand, refers to the organization's preparedness and willingness to embrace change. By framing DL as the independent variable (IV) and Change Readiness as the dependent variable (DV), the hypothesis implies that strong DL correlates with higher levels of change readiness within an organization. Hance, researchers propose a hypothesis:

H_{1a}: There is a significant and positive impact of digital leadership on digital transformation in ICT industry.
H_{2a}: Digital leadership has positive and significant impact on change readiness.

2.3. Digital Transformational Leadership

According to El Sawy et al. (2020), there are a number of factors that can impact to successful implementation of DT, none can have a much influence as a competent and skilled leadership style. The DTL possesses a visionary outlook and strategic mindset that enables them to articulate a compelling vision for digital change within the organization. The DTL highlights the importance of leaders to be data driven to make decisions, how organizational operations can be improved and reengineered through DT (McCarthy, Sammon, & Alhassan, 2022). By inspiring stakeholders with valuable insights of their work and direction, DTL creates a sense of urgency and momentum for DT initiatives. In general, digital characteristics high level of significance in recent years and will continue to be more digitalization and remote working as compared to traditional working (Lv et al., 2024). So, DTL's ability to communicate the strategic importance of DT, set clear objectives, and mobilize resources toward achieving digital goals enhances organizational alignment and commitment, driving the successful implementation of digital initiatives (McCarthy, Sammon, & Alhassan, 2022). According to previous research arguments, researchers propose a hypothesis:

The literature exists on DTL and highlights that the leadership style doing the right things for strategic success, organizational change and digitalization (Senadjki et al., 2024). Therefore, positing a positive association among DTL and CR suggests that leaders who exhibit transformative qualities in navigating digital initiatives within an organization can significantly impact its readiness for change (Gigliotti et al., 2019; Senadjki et al., 2024). According to previous researches, it is very difficult for one individual leaders r to be all encompassing whereas it engaged to delivering DT programs. DTL involves visionary leadership that not only embraces digital advancements but also drives transformative change throughout the organization (Aboobaker & KA, 2021). It also highlights the need for DTL to be considered as a team sport and readiness to change. CR, on the other hand, pertains to the organization's preparedness and willingness to accept and adapt to change. By framing DTL as the independent variable (IV) and CR as the dependent variable (DV), the hypothesis suggests that effective digital leaders are instrumental in fostering a climate conducive to change readiness. Hence, researchers proposed a hypothesis:

H_{1b}: Digital transformational leadership has a positive impact on digital transformation
H_{2b}: Digital transformational leadership has a positive relationship with change readiness

2.4. Change Readiness

The CR is one of the great phenomena in social sciences, and interest in this topic is growing as organizations cope with advanced technologies (Pettigrew, Woodman, & Cameron, 2001). So, it suggests an intrinsic connection between an organization's preparedness for change and its successful adaptation to digital advancements. These organizations are undergoing digitalization, which involves high complexity. This complexity requires rapid change for organizations to operate in a competitive environment (Gordon et al., 2000). CR encompasses an organization's willingness and ability to proactively engage with and embrace change. Besides, when organizational environment change is pervasive, the organization must adopt change readiness to survive(Gordon et al., 2000). This includes factors such as leadership support, employee motivation, and organizational culture conducive to innovation. According to previous studies, CR is isomorphic and most of all individuals perceive readiness to change along with the

same dimensions (Gordon et al., 2000). So, CR within an organization lays the groundwork for successful DT endeavors. When employees and leadership are open to change and possess the necessary skills and mindset to adapt, they are more likely to embrace digital innovations. Therefore, researchers propose a hypothesis:

H_{1c}: Change readiness has a significant positive impact on digital transformation.

2.5. Change Readiness as Mediator

Study objective is to investigate how CR perform critical intermediary between DL and DT during transformation initiatives (Senadjki et al., 2024). Digital leaders, through their visionary thinking and strategic acumen, inspire organizational change and drive DT initiatives (Lv et al., 2024). According to present literature organizational readiness to change emphasize the role of leadership style (El Sawy et al., 2020). In this study researchers suggested DL as antecedent of change readiness. However, the successful implementation of digital initiatives requires a workforce that is prepared and willing to embrace change (Pettigrew, Woodman, & Cameron, 2001). The DL tend to provide vital support to that eventually change the basic value (Zhu et al., 2022). CR encompasses factors such as organizational culture, employee attitudes, and resource allocation that enable organizations to adapt to change effectively (Rusly, Corner, & Sun, 2012). By fostering a culture of openness, transparency, and collaboration, digital leaders cultivate change readiness within the organization, empowering individuals with the idea of DT and driving organizational change initiatives.

The DT is the buzzword after the COVID-19 pandemic era due to rapidly changing organizational environment and many digital technologies and especially Industry 4.0 (AlNuaimi et al., 2022). DTL play a crucial role in articulating a compelling vision for digital change and aligning organizational goals with DT objectives. The DT means more comprehensive digitalization that 360-change organizational culture as digital era (Senadjki et al., 2024). By inspiring stakeholders with a shared sense of purpose and direction, DT leaders create a sense of urgency and momentum for DT initiatives. The digitalization manifested itself as automation of organization operations, and it leads to business readiness to change (Rusly, Corner, & Sun, 2012). However, the successful implementation of digital initiatives requires a workforce that is prepared and willing to embrace change. With dynamic changes of Industry 4.0, the digitalization process in business includes comprehensive transformation of business processes (Wahid & Zulkifli, 2021). Change readiness encompasses factors such as organizational culture, employee attitudes, and resource allocation that enable organizations to adapt to change effectively. Therefore, DTL influences change readiness by fostering a culture of innovation, collaboration, and empowerment that enhances organizational preparedness for DT (Zhang et al., 2024). Organizations with effective DTL and high levels of CR are better equipped to navigate the complexities of DT, foster innovation, and achieve sustainable DT outcomes over time. Hence, researchers propose a hypothesis:

H_{3a}: Change readiness mediates the relationship between digital leadership and digital transformation
H_{3b}: Change readiness plays a mediating role between digital transformational leadership and digital transformation

2.6. Person-Organization Fit and Person-Job Fit as Moderators

The context of DT outcomes, POF has been documented as a factor that positively impacts on individuals in the form of increasing motivation, and enhancing organizational goals (Kristof-Brown, Zimmerman, & Johnson, 2005). When employees fit with organizational values (Hoffman & Woehr, 2006) . Therefore, in the context of CR and DT, employees who perceive a strong value fit between themselves and the organization are likely to be more receptive and proactive in embracing change initiatives (Sekiguchi, 2004). So, employees enable to trust with each other share important issue. They intrinsically motivated, committed and aligned with DT efforts, thereby facilitating the successful implementation of digital initiatives (Wahid & Zulkifli, 2021). Organizations that prioritize POF are better positioned to leverage the strengths and capabilities of their employees to drive successful DT outcomes (Hoffman & Woehr, 2006).

The PJF having two direct components, the demand ability fit and needs-supplies fit. These components are distinct fit within the border PJF construct(Kristof-Brown, Zimmerman, &

Johnson, 2005). High change readiness implies that individuals or organizations possess certain characteristics or attributes that make them more inclined and prepared to accept and adapt to change(Pettigrew, Woodman, & Cameron, 2001). However, PJF is related with individual personality attributes and organizational task requirements (Bao et al., 2022). These characteristics might include a positive attitude towards change, a willingness to get knowledge and learn new skills, and a culture that values innovation and continuous improvement(Sekiguchi, 2004). The PJF is a strong predictor for organizational change readiness making it prime construct for DT(Bao et al., 2022). Organizations with high change readiness often have established processes for managing change, such as effective communication channels, leadership support, and employee training programs focused on building resilience and adaptability (Rusly, Corner, & Sun, 2012). The hypothesis suggests that organizations with higher levels of change readiness are better positioned to undertake and succeed in DT initiatives(McCarthy, Sammon, & Alhassan, 2022). This is because they have the necessary mindset, capabilities, and organizational support structures in place to embrace change and drive innovation. However, researchers propose that:

H_{4a}: Person-organization fit play interaction effect between change readiness and digital transformation.
H_{4b}: Person-job fit moderates the relationship between change readiness and digital transformation

3. Research Methods

3.1. Psychological Paradigm

According to Kuhn (1997), psychological paradigms are frameworks that guide scientific research, including procedures, scientific disciplines, sets of assumptions, and methods used to explain the topic (Clark, 1998). Research paradigm is very important because it helps structure the entire research process. In this research, a positivist approach was chosen, which focuses on using natural and quantitative methods to gather and analyze data(Clark, 1998). The approaches are most suitable for this research design because it uses quantitative data and deductive reasoning, starting with theories that are then tested with evidence (Clark, 1998). This quantitative study identifies the causal relationship between the variables that pertain to the research problem (Khan & Ullah, 2025). The hypothesis is constructed to be tested from the data collected from the ICT employees by using simple random sampling (SRS).

3.2. Data Collection and Sampling

The data was obtained from ICT companies selected by SRS in five major cities (Karachi, Islamabad, Sahiwal, Lahore, Peshawar). Researchers get the list of all ICT companies working in Pakistan from PASHA's website and select the 150 most reputable companies (Khan et al., 2025; PASHA). To minimize the bias, enhance the representativeness, and give an equal chance of selection, researchers apply SRS, which is a type of probability sampling. Through SRS, every individual had an equal chance for selection and helped analyze valid statistical analysis by providing a random and unbiased sample. So, it enhances the generalizability of the results across the diverse ICT workforce in Pakistan (Khan et al., 2025). Researchers targeted those individuals who working under at least one supervisor or higher authority(Farh & Cheng, 2000). The sample size was obtained by using Hair et al. (2010) formula (No of items in questionnaire × 7: 28*9=196) (Hair et al., 2006; Hair, Howard, & Nitzl, 2020). The data was collected by a cross-sectional survey utilizing a meticulously crafted (Google Form) online questionnaire and distributed to 300 respondents (Islam et al., 2024). Before analyzing the data, researchers remove those participants who engage in insufficient effort responding. Therefore, the final sample consisting of 257 participants with an 85.6% response rate was used for further analyses conducted for this research. The average aged of individuals ranged between 25-55 years. Gender was a fairly balanced proportion (Female: 50.59%; n=130; Male: 49.41%; n=127). Most participants were highly educated however, 65% had earned a university postgraduate degree. A large portion of employees (76%) had worked with the organization for 2-8 years' tenure.

To minimize common source and method biases and reduce non-engagement, the researchers surveyed in two stages with a four-week interval between them. Identification codes were used to maintain respondent anonymity without requiring personal information. Online data collection via Google Forms was chosen for its wide reach, cost-effectiveness, and efficiency, as it avoids the need for printed questionnaires and facilitates quicker data analysis (Yadav, Pandita, & Singh, 2022). To check the face validity, questionnaire's clarity, understanding, and

effectiveness, researchers conduct a pilot testing of 30 individuals with a balanced sample (15 industry experts, 15 academia) (Khan & Ullah, 2025). The findings show that participants had no issue understanding all questionnaire statements. Finally, when authors go to questionnaire-based survey data collection, they should take into account ethical considerations (Yadav, Pandita, & Singh, 2022). It is very important in all areas of research, besides that questionnaire-based survey study (Khan & Ullah, 2025).. In which the authors properly inform the participants about the study and what procedures are involved in it. Most of the ICT firms exist in the private sector. So, they should also be allowed to ask questions about the research and decline to participate. The authors also protected the privacy of the participants, they don't share their personal information without their consent.

3.3. Survey Instrument

Researchers employed a self-reported questionnaire for data collection from employees working in ICT. The observed items of this whole questionnaire required participants to rate the importance of each item(Coleman, 1988). Each variable of interest utilized in this study was measured on a 5-point Likert scale. Researchers use all instruments that have already been tested for reliability and validity (Khan, Ali, & Rehman, 2024). Therefore, digital leadership (DL) was measured by 6 items. Zeike et al. (2019) developed this scale and validated it by Zhu et al. (2022). The sample item includes "My leader is a digital expert". The digital transformational leadership (DTL) was measured by a 6-item scale. This 6-item scale was adapted and modified from the previous TFL scale (Chen & Chang, 2013; Podsakoff, MacKenzie, & Bommer, 1996). This scale is used and validated by AlNuaimi et al. (2022). A sample item is "Our leaders stimulate all members to think about digital transformation ideas". Nasiri et al. (2020) developed a 5-item scale of digital transformation (DL) and verified it by AlNuaimi et al. (2022). A sample item is "In my organization, we aim at achieving information exchange with digitality". The change readiness (CR) access is through a 3-item scale developed by Dunham-Presenter et al. (1989) and verified by Aboobaker and KA (2021). As a sample item, "I am inclined to try new ideas". Researchers measured person-organization fit (POF) as a 5-item scale developed by Resick, Baltes and Shantz (2007), used and validated by Zhu et al. (2022). A sample item: "The values of this organization are similar to my own values". Finally, the person-job fit (PJF) was measured by 3 item scale developed by previous studies (Mulki, Jaramillo, & Locander, 2006; Speier & Venkatesh, 2002), used and validated by Bao et al. (2022). A sample item included "There is a good fit between my job and me". According to Guo, Xiao and Yang (2012), human capital plays a significant role in individual and organizational success. It includes not only skills, expertise, and knowledge, but also personal and professional experience (Coleman, 1988). Due to the significant effects of human capital (Frederiksen & Kato, 2018; Guo, Xiao, & Yang, 2012) on the outcome variable, the study-controlled participants' age, education, gender, and experience. All statements of variables are demonstrated in Appendix A. Furthermore, Table 1 describes the reliability coefficient values of all constructs.

3.4. Data Analysis Techniques

The analysis is done using PLS-SEM in SmartPLSv4.1.1.2 (Hair Jr et al., 2021; Sanchez, 2013). The PLS-SEM is a multivariate nonparametric method used to evaluate path modeling with latent variables(Hair Jr et al., 2021). It helps researchers to investigate the linkages between manifest and latent variables, outer model and inner model simultaneously (Duarte & Raposo, 2010). The technique is widely used in management and social sciences-related studies due to its strong components (Hair, Ringle, & Sarstedt, 2011). PLS-SEM consists of an outer model, generally driven as measurement, and an inner model as the structural model (Hair, Howard, & Nitzl, 2020). According to past studies outer model demonstrates how observed variables or items represent the latent variable to be measured (Hair et al., 2019; Khan, Ali, & Rehman, 2024). It also assesses the internal consistency (reliability) and validity of whole constructs, which are demonstrated in Table 1 and 2 respectively. In the meantime, the inner model shows the strength of the estimations between latent variables. It evaluated the percentage of variance by looking at the R-squared value (Duarte & Raposo, 2010). It shows a lower confidence interval at 2.5% and an upper confidence interval at 97% to determine the relationship of variables. The PLS-SEM provides several model goodness-of-fit indexes which are listed in Table 2. It aims to validate the outer model, inner model, and overall model.

4. Results

4.1. Measurements Model, validity, and reliability

In PLS-SEM, researchers employed the bootstrapping function of R Studio PLS-PM and SEMINR packages by utilizing 5,000 replicates and 257 cases. The results of measurement model are demonstrated in Table 1, which consists of outer loading AVE, CR, Alpha value, mean, and standard deviation (Dos Santos & Cirillo, 2023). Fornell and Larcker (1981) criterion was employed to assess discriminant validity which is shown in Table 2. To check the robustness of discriminant validity, researchers also analyzed the heterotrait-monotrait (HTMT) ratio. The model goodness of fit indexes is also shown in Table 2, which includes CFI, TLI, NNFI, RNI, and RMSEA with matric, scaled, and robust views. The benchmark of composite reliability is greater than 0.7, while all latent variables show a value range from 0.861 to 0.925 and are over 0.7. The average variance extracted (AVE) assesses the convergent validity and fulfills the criteria by greater than 0.5. However, all latent variables' AVE values range from 0.644 to 0.802 (Dos Santos & Cirillo, 2023). It shows that measures have good convergent validity. All values of goodness-of-fit indexes perfectly meet the criteria of model goodness of fit. The results and threshold value are demonstrated in Table 2, respectively. The HTMT ratios shown in Table 2 as italic form and well below the threshold value (0.85)(Hair, Howard, & Nitzl, 2020). Meanwhile, the diagonal value of Fornell and Larcker (1981) criterion of AVE square root is greater than their whole correlations. So, these measures fulfill the benchmark for discriminant validity. To assess the multicollinearity between the latent constructs, researchers analyzed the variance inflation factor. The results of these measures ranged from 1.241 to 3.841less than 10, indicating the absence of multicollinearity (Khan & Ullah, 2025). Lastly, researchers check the CMV by analyzing Harman's Single Factor test, which shows the value is 30.05% less than 50%. It means that data is clear from self-reported bias (Podsakoff et al., 2003).

Table 1: Descriptive Statistics, Factor Loadings, and Reliability

Construct	Items	Loading	α	CR	AVE	Mean	Std. Dev
Digital Leadership	DL1	0.738	0.861	0.861	0.644	2.141	0.614
	DL2	0.813					
	DL3	0.824					
	DL4	0.813					
	DL5	0.857					
	DL6	0.828					
Digital Transformational Leadership	DTL1	0.825	0.906	0.906	0.678	3.714	0.571
	DTL2	0.827					
	DTL3	0.785					
	DTL4	0.871					
	DTL5	0.837					
	DTL6	0.854					
Digital Transformation	DT1	0.837	0.876	0.876	0.705	2.514	0.621
	DT2	0.868					
	DT3	0.891					
	DT4	0.895					
	DT5	0.901					
Change Readiness	CR1	0.857	0.924	0.925	0.769	2.851	0.517
	CR2	0.824					
	CR3	0.881					
Person-Organization Fit	POF1	0.817	0.867	0.907	0.718	2.861	0.621
	POF2	0.914					
	POF3	0.874					
	POF4	0.825					
	POF5	0.861					
Person Job Fit	PJF1	0.839	0.914	0.915	0.716	2.914	0.624
	PJF2	0.863					
	PJF3	0.954					

Note(s): N=257, Source(s): Author's work

Table 2: Discriminant Validity and Model Goodness of Fit

Variables	1	2	3	4	5	6
DL	0.733	*0.421*	*0.287*	*0.415*	*0.397*	*0.475*
DTL	0.617	0.825	*0.394*	*0.283*	*0.274*	*0.371*
DT	0.517	0.714	0.839	*0.345*	*0.417*	*0.435*
CR	0.691	0.628	0.687	0.819	*0.425*	*0.415*
POF	0.502	0.608	0.614	0.714	0.771	*0.374*
PJF	0.578	0.529	0.578	0.691	0.617	0.761

	TLI>0.9	NNFI>0.9	RNI>0.9	RMSEA<0.07	IFI>0.9	RFI>0.9
Matric	0.942	0.942	0.952	0.063	0.948	0.927
Scaled	0.948	0.948	0.956	0.057	0.925	0.917
Robust	0.951	0.951	0.958	0.067	0.917	0.957

Note(s): N=257. The bold numbers in the diagonal show the square root of the AVE, the italic numbers show the HTMT values. Source(s): Author's work

4.2. Path Analysis

All results of direct, mediation, and moderation are shown in Table 3 as path analysis. The direct estimation. (DL -> DT; DL -> CR;) indicates the positive and significant impact of DL on DT, DL on CR, (β = 0.471, CI [0.371, 0.587]), (β = 0.397, CI [0.371, 0.587]). It indicates that a higher level of DL predicted a higher level of DT and CR. These findings support hypotheses H1a and H2a, confirming that higher levels of DL are associated with increased CR and DT. This suggests that effective DL is crucial for fostering readiness for change and driving successful DT. The DTL is significantly associated (DTL -> DT; DTL -> CR) with DT and CR (β = 0.397, CI [0.201, 0.681]), (β = 0.481, CI [0.374, 0.594]), and supported H1b and H2b. This supports hypotheses H1b and H2b, demonstrating that higher levels of DTL enhance CR and facilitate DT. These findings underscore the role of DTL in driving change readiness and advancing digital transformation efforts. The results reveal that CR is statistically linked (CR -> DT) with DT (β = 0.301, CI [0.297, 0.348]). Hence, H1c was accepted.

The results of 5000 bootstrapped samples with a 95% bias-corrected (BC) confidence interval (CI) indicating that CR (β = 0.251, CI [0.174, 0.361]), (β = 0.217, CI [0.128, 0.374]) positively mediate the relationship between DL to DT, and DTL to DT. This implies that higher levels of CR strengthen the impact of both DL and DTL on DT, highlighting the importance of readiness for change in driving successful DT initiatives. Hence, H3a, and H3b accepted and supported. The moderating role of POF and PJF estimated through the interaction terms (CR*POF -> DT), (CR*PJF -> DT). The interaction terms have been estimated (β = 0.214, CI [0.174, 0.372]), (β = 0.371, CI [0.134, 0.348]) and shown a significant relationship. It means that the combination of CR to POF, and CR to PJF further enhances the impact of DT. Specifically, the interaction between CR and both POF and PJF amplifies the effect of CR on DT. This suggests that when CR is coupled with a strong sense of fit within the organization (POF) and job role (PJF), it further strengthens the effectiveness of DT efforts. Therefore, POF and PJF perform significant role in boosting the positive influence of CR on DT, validating hypotheses H4a and H4b.Furthermore, the control variables as age (β = 0.014, $p < 0.001$), gender (β = 0.031, $p < 0.001$), education (β = 0.052, $p < 0.001$), and experience (β = 0.027, $p < 0.001$) were significantly affected by DT and DTL.

Table 3: Path Analysis Estimation

Variables	Hypothesis	Estimates	2.5%CI	97.5%CI	Results
DL -> DT	H_{1a}	0.471	0.371	0.587	Accepted
DTL -> DT	H_{1b}	0.397	0.201	0.681	Accepted
CR -> DT	H_{1c}	0.301	0.297	0.348	Accepted
DL -> CR	H_{2a}	0.427	0.381	0.583	Accepted
DTL -> CR	H_{2b}	0.481	0.374	0.594	Accepted
DL -> CR -> DT	H_{3a}	0.251	0.174	0.361	Accepted
DTL -> CR -> DT	H_{3b}	0.217	0.128	0.374	Accepted
CR*POF -> DT	H_{4a}	0.214	0.174	0.372	Accepted
CR*PJF -> DT	H_{4b}	0.271	0.134	0.348	Accepted

Note(s): N=257. R^2, CR=449, DT=532, Source(s): Author's Creation

5. Discussion of Results

This research initially hypothesized and examine the impact of DT, it positively influences both CR and DT and results conforms these hypotheses. With the underpinning support of TLT, DT act as predictor variable for change by creating a platform for DT and motivating employees to navigate and openness for new process and technologies (Zeike et al., 2019). According to TLT effective leadership style are essential in guiding their followers through complex changes by providing clear vision, empowerment, and personal development (Senadjki et al., 2024). In the context of DT, the DL excel the alignment of organizational objectives with digital strategies, enhance creative environment and motivate follower to navigate technology-driven changes(Zhu et al., 2022). Leaders who exhibit strong DL qualities can effectively describe the necessity and

benefits of digital change, thus enhance the CR to embrace new technological skills. To identifies to potential resistances and alleviating concerns by supportive encouragement, DL significantly impacted CR (Rusly, Corner, & Sun, 2012). This heightened CR enable individuals to better motivate and engage with to acceptance digital initiatives, resulting in more successful DT outcomes.

With the underpinning support of TLT, the DTL also show positive relationship with both stated variables which empirically conformed in path analysis section (AlNuaimi et al., 2022). According to TLT, DTL are practically effective leadership style that required dynamic, rapid change, and adaptation as like DT(Ly, 2024). The DTL possess the characteristics to inspire intrinsically and empower their followers to think out of the box and take ownership of the DT process. By aligning and empowering the employees DTL build trust and commitment, which is essential for successful DT initiatives(Nguyen et al., 2020). Our study reinforces the idea that DTL not only navigate or manage the CR but also but also actively engage the individuals in the process, making them integral participants in the transformation journey. The interaction effect of POF and PJF further demonstrate why CR influence DT. The TLT posits that leaders who enhance the motivation, empowerment and alignment between the employees' personal factors with organizational objective can significantly increase their commitment about CR initiatives(Gigliotti et al., 2019). The findings of H4a and H4b demonstrate that when individuals perceived a strong fit between their personal values and organization objective (POF)(Zhu et al., 2022) and between their job role, interest, skills and interest (PJF)(Sekiguchi, 2004), they more committed, engaged and aligned with DT efforts. This alignment reduces the force of employee inertia or resistance to change and increase the effectiveness of DT. Therefore, DL, and DTL enable the employees' strong sense of fit between organizational value and their role amplify the positive impact of CR on DT. Finally, these leadership styles not only motivate individuals for change but also ensure their personal and professional alignment with the organization increase the overall success of DT initiatives.

5.1. Theoretical Implication

Study insights important contributions in theory and practice, significantly enhancing the understanding of transformational leadership theory (TLT) in the context of DT. In theoretical perspective it provides substantial contribution to the present body of literature by expanding the understanding of how DT, DTL particularly in the context of DT, influences CR and successful transformation outcomes within ICT firms. The results confirm that DT, DTL play as a driving force enhancing CR and facilitating successful DT, this study not only affirms but also extends the principles of TLT (Chanias, Myers, & Hess, 2019). This extension is critical as it underscores the applicability of TLT in digital landscape by revealing that DL, and DTL does not directly impacted DT (Chanias, Myers, & Hess, 2019). However, it confirming that leaders who effectively engage and inspire their employees can significantly boost their organization's CR and facilitate smoother transitions during DT. Through affirming the relationship of DL, and DTL with CR and DT, study extent the theoretical frameworks and encourages future research into different leadership styles such as paradoxical leadership in similar context, validates the relevance of DT, and DTL in contemporary digital settings. This is consistent with recent study conducted by Senadjki et al. (2024) and AlNuaimi et al. (2022) which highlights the significance of DL, and DTL in navigating digital changes and DT. Moreover, this research incorporates the POF and PJF as multiplayers providing valuable theoretical insights. It demonstrates that CR significantly amplified the impact on DT when individuals perceived strong alignment with their job (PJF) and broader organizational context (POF). This extension of TLT shows the essentials of individual contextual factors such as POF and PJF shaping the effectiveness of leadership during organizational change. It also associated with recent study findings by Zhu et al. (2022) and Woerkom et al. (2024) which highlights that strong POF and PJF among employee and their organization enhance the impact of leadership and CR outcomes. Through integrating the underpinning of TLT for POF and PJF, this research provides more nuanced findings of how CR interacts with DT initiatives filling a critical gap in the literature.

5.2. Managerial Implication

Though this research was conducted within the context of Pakistan's ICT industry (Farheen et al., 2023). However, its findings and implications can inform practices across different cultures and regions undergoing DT. First, the results emphasize that DL and DTL are critical for enhancing a culture of CR and creativity within ICT industry (Farheen et al., 2023). Leaders must not only possess digital technologies, technical knowledge and expertise but also, they show DTL qualities

such as intrinsically motivator, systematic change, aligning people, and leading by examples to guide their followers, navigate and manage cultural and organizational shifts that accompany DT (Chanias, Myers, & Hess, 2019). These insights are practically essential for training and development department, HR, and leadership development programs, which should significantly focus on cultivating leaders who can enable the digital initiatives aligned with DT endeavors (Chanias, Myers, & Hess, 2019). Second, researchers underscore the importance of aligning organizational objectives with employees' abilities, skills and values emphasizing the multiplayer role of POF and PJF (Woerkom et al., 2024; Zhu et al., 2022). In practice, researchers suggested that ICT firms and other organizations who enable the DT initiatives should prioritize the retention and recruitment of those individuals whose personal expertise, goals and abilities are aligned with organization's digital initiatives. By doing so, organizations minimized the resistance and enhance their overall CR and increase the likelihood of successful DT (Chanias, Myers, & Hess, 2019). In addition, those individuals who maintain and aligned their roles with whole organizational objective can intrinsically motivated, engaged, which is essential for maintaining competitive advantages in a rapidly evolving digital landscape. Finally, researchers demonstrate the importance of nurturing CR environment with ICT industry(Gigliotti et al., 2019). The authors suggested that leaders should actively enhance continuous adaptability, learning, and openness to change among followers. Through this initiative organizations can reduced employee inertia or resistance to change for DT, minimize disruptions, and accelerate the successful adoption of new technologies (AlNuaimi et al., 2022). These proactive methods can build change-ready workforce which critical for ICT organizations aiming to maintain competitiveness in continuous changing digital landscape. Through creating a workplace where CR is embraced and anticipated, organizational can more effectively manage, and navigate themselves to succeed in their DT efforts, ensuring long-term sustainable innovation.

6. Conclusion

Our study reinforces the value of DT, DTL, and CR in the digital era and reaffirms the insights of TLT in driving successful DT. It demonstrates that both leadership styles play significant insights in enhancing CR and achieving effective DT. Moreover, study shows that POF and PJF significantly moderate the relationship between CR and DT. These findings underscore the importance of alignment of individuals roles and organizational objective with their expectations to maximize the benefits of CR. In this study, researchers targeted 150 ICT companies and get SRS, survey-based feedback from 350 employees who working as different positions. To analyzed this first-hand primary data, we employed R studio statistical package with PLS-PM and SEMINR libraries. Overall, the study offers theoretical contribution and practical guidance for top management and organization, recommending the development and enable the investigated leadership styles to drive the CR to better DT initiatives and also import individuals' perceptions of fit. By integrating strong leadership style with a focus on alignment, organizations can enhance their DT efforts and achieve more effective and sustainable outcomes.

6.1. Limitation and Future Recommendation

Researchers highlight few limitations of this study, and there is still room for future research. Study targeted the audience of ICT industry of Pakistan with cross-sectional data collection study design, so it can be limited the generalizability of results to other industry DT dynamics may differ. The cross-sectional research design may cause social desirability which associated with common method biasness. This study uses only one mediator variable CR and two moderating variables POF and PJF while excludes other potentially significant factors. However, future researchers should address these limitations by getting the data from different industries such as manufacturing, tourist, or academia to replicate the study. The potential researchers employing longitudinal or mix method research designs with interview-based data collection to minimized social desirability and self-reported biasness. Researchers may analyze serial mediation by employee engagement, emotional intelligence, psychological empowerment, with multiplayer effect of organizational justice or culture, and leader vision. It can be used different leadership styles such as paradoxical leadership, authentic leadership, and ethical leadership as predictor variables. Researchers expand the geographic locations and industry to enhance generalizability of results which provide more understanding of DT across different industry and geographic locations. Finally, considering emerging technologies such as artificial intelligence and blockchain could provide deeper insights into how DL and DTL adapt and influence organizational change in a rapidly evolving digital landscape.

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Appendix A

6 item scale of Digital Leadership is developed by Zeike et al. (2019) and validated by Zhu et al. (2022) (Independent Variable 1)

1. My leader thinks using digital tools is fun.
2. My leader is a digital expert.
3. When it comes to digital knowledge, my leader is always up-to-date
4. My leader driving the digital transformation forward proactively in our unit
5. My leader can make others enthusiastic about the digital transformation
6. My leader has a clear idea of the structures and processes that are needed for the digital transformation

6 item scale adapted and modified to fit the DT from the previous TFL scale(Chen & Chang, 2013; Podsakoff, MacKenzie, & Bommer, 1996). This scale is used and validated by AlNuaimi et al. (2022) (Independent Variable 2)

1. Our leaders inspire all members with the digital transformation plans for our organization.
2. Our leaders provide a clear digital transformation vision for the organization's members to follow.
3. Our leaders motivate team members to work together for the same digital transformation goals.
4. Our leaders encourage all members to achieve digital transformation goals for our organization.
5. Leaders in my organization act by considering the digital transformation beliefs of all members
6. Our leaders stimulate all members to think about digital transformation ideas.

5 item of the digital transformation scale developed by Nasiri et al. (2020), used and verified by AlNuaimi et al. (2022) (Dependent Variable)

1. In my organization, we aim to digitalize everything that can be digitalized.
2. In my organization, we collect large amounts of data from different sources.
3. In my organization, we aim to create more robust networking with digital technologies between the different business processes.
4. In my organization, we aim to enhance an efficient customer interface with digitality.
5. In my organization, we aim at achieving information exchange with digitality.

3 item scale of change readiness developed by Dunham-Presenter et al. (1989), used and varified by Aboobaker and KA (2021) (Mediator Variable)

1. I look forward to change at my institution.
2. I am inclined to try new ideas.
3. I intend to do whatever possible to support change in my institution.

5 item scale of Person-organization fit developed by Resick, Baltes and Shantz (2007), used and validated by Zhu et al. (2022) (Moderated Variable 1)

1. I feel my values "match" or fit this organization and the current employees in this organization.
2. I think the values and personality of this organization reflect my own values and personality.
3. the values of this organization are similar to my own values.
4. my values match those of current employees in this organization.
5. I feel my personality matches the "personality" or image of this organization.

3 item scale of Person-Job fit developed by previous studies (Mulki, Jaramillo, & Locander, 2006; Speier & Venkatesh, 2002), used and validated by Bao et al. (2022) (Moderated Variable 2)

1. My skills and abilities perfectly match what my job demands.
2. My personal likes and dislikes match perfectly what my job demands.
3. There is a good fit between my job and me.