PRIMARY RESEARCH

Digital leadership style and employee innovative behavior: An empirical analysis on virtual teams

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Abstract

The primary purpose of this research was to investigate and contribute empirical evidence on the relationships between digital leadership style, emotional intelligence, employee digital capability, and innovative behavior. The study aimed to fill existing gaps in the literature by proposing a comprehensive model and exploring the mediating roles of emotional intelligence and employee digital capability in the relationship between digital leadership and employee innovative behavior. A quantitative research design was employed, with a sample size of 203 employees drawn from various industries in Albania. The sample size was determined using the rule of thumb for regression analysis. A random sampling technique ensured representativeness, and data were collected through an online questionnaire. Statistical analysis was conducted using the Statistical Package for the Social Sciences (SPSS), encompassing descriptive, inferential, and mediation analyses. This methodology facilitated a robust examination of the proposed relationships. The findings of this study revealed significant and positive relationships between digital leadership style and employee innovative behavior. Moreover, emotional intelligence was identified as a mediator in this relationship, emphasizing the importance of a positive emotional climate. Additionally, employee digital capability emerged as a mediator, highlighting the significance of technological proficiency. These findings contribute to our understanding of the interconnected dynamics within organizations in the digital age. This research contributes both theoretically and practically to the existing body of knowledge. Theoretically, it adds empirical evidence to the evolving discourse on leadership and innovation in the digital era, addressing gaps in the literature. The proposed comprehensive model, considering the mediating roles of emotional intelligence and employee digital capability, offers a nuanced understanding of the multifaceted dynamics within organizations. Practically, this study provides insights for organizational leaders and policymakers, informing strategies for cultivating innovation in the ever-changing digital landscape. The findings can guide leadership development programs, training initiatives, and administrative policies aimed at creating environments that foster innovation.

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INTRODUCTION

In the contemporary digital era, organizations are navigating an unprecedented wave of technological advancements that are reshaping the landscape of leadership and innovation. The increasing prevalence of digital technologies has led to a paradigm shift in the way leaders operate, necessitating a deeper understanding of the relationships between digital leadership style, emotional intelligence, employee digital capability, and innovative behavior. This research aims to contribute to this evolving discourse by investigating the intricate dynamics within organizations and exploring how digital leadership practices influence the innovative behavior of employees as organizations strive to remain competitive in an ever-changing digital landscape, unraveling the complexities of these relationships becomes imperative for effective leadership strategies and the cultivation of innovation-ready workforces (Behie et al., 2023)—the empirical landscape underscores the trans-

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formative impact of digital technologies on organizational structures and leadership paradigms. The digitization of business processes has given rise to a new breed of leaders, digital leaders, who leverage technology to navigate complexities and foster innovation (Lyu, 2023). Concurrently, emotional intelligence is recognized as a critical competency influencing interpersonal dynamics within the workplace (Kuday & Erdoğan, 2023). This research seeks to bridge these concepts, examining how emotional intelligence mediates the relationship between digital leadership style and employee innovative behavior. Additionally, this study explores the mediating role of employee digital capability, acknowledging the significance of technological proficiency in the digital age (Alant & Bakare, 2021).

The variables central to this study digital leadership style, emotional intelligence, employee digital capability, and innovative behavior are informed by a rich body of literature. Digital leadership style encompasses the ability to leverage technology effectively and navigate the complexities of the digital landscape (Aránega, Montesinos, & del Val Núñez, 2023). Studies have highlighted its positive influence on organizational outcomes, including innovation (Miao, Yu, Bozionelos, & Bozionelos, 2023). Emotional intelligence, defined as the ability to perceive, understand, and manage emotions, is posited to mediate the impact of leadership on employee outcomes (Dehnavi et al., 2022). Research suggests that emotionally intelligent leaders foster positive emotional climates, influencing employee behaviors such as creativity and innovation. Employee digital capability, encompassing the skills needed to navigate digital tools, is integral in the context of digital leadership (Afrianty, Artatanaya, & Burgess, 2022)—the literature emphasizes the role of digital capability in shaping innovative behavior and organizational adaptability.

Prior research has yielded valuable insights into the interplay between digital leadership, emotional intelligence, employee digital capability, and innovation. Xia et al. (2023) assert that digital leaders create agile and innovative organizational cultures by embracing and integrating technology. Núñez, García, and Abbas (2023) highlight the mediating role of emotional intelligence, emphasizing its impact on creating positive emotional climates conducive to innovation. A study by Gonçalves, Bergquist, Alänge, and Bunk (2022) emphasizes the importance of digital capability in shaping innovation within organizations. However, while these studies provide foundational knowledge, the relationships between these variables remain complex and warrant further investigation. Despite the existing body of literature, notable gaps persist in our understanding of the

relationships between digital leadership, emotional intelligence, employee digital capability, and innovative behavior. Existing research often focuses on individual components in isolation, overlooking the interconnectedness of these variables within the context of the digital workplace. This study addresses these gaps by proposing a comprehensive model that considers the mediating roles of emotional intelligence and employee digital capability in the relationship between digital leadership and employee innovative behavior. By bridging these gaps, this research aims to provide a more holistic understanding of the multifaceted dynamics within organizations in the digital age.

The primary aim of this research is to investigate and contribute empirical evidence on the relationships between digital leadership style, emotional intelligence, employee digital capability, and innovative behavior. Specifically, this study aims to test the hypotheses that posit a significant and positive relationship between digital leadership style and employee innovative behavior, with emotional intelligence and employee digital capability mediating these relationships. By exploring these dynamics, the research seeks to enhance our theoretical understanding of leadership and innovation in the digital age, providing practical insights for organizations striving to thrive in the rapidly evolving digital landscape. The significance of this research lies in its potential to inform leadership practices and strategies for cultivating innovation in contemporary organizations. As digitalization continues to reshape industries, understanding how digital leadership influences emotional intelligence, digital capability, and innovative behavior becomes critical for organizational success. The findings of this study can guide leadership development programs, training initiatives, and organizational policies aimed at creating environments that foster innovation. Moreover, the research contributes to the academic discourse on leadership and innovation, adding empirical evidence to the evolving theoretical frameworks in the field. By addressing the identified research gaps, this study endeavors to provide valuable insights that are both theoretically robust and practically relevant for organizations navigating the complexities of the digital era.

LITERATURE REVIEW
Theoretical Background
Transformational Leadership Theory is a leadership style characterized by its emphasis on inspiring and motivating followers to achieve extraordinary outcomes and unlock their full potential (Siangchokyoo, Klinger, & Campion, 2020). In the context of organizational change and

the challenges posed by the digital era, this theory comprises several key components. Firstly, idealized influence involves leaders acting as role models, earning trust and respect by setting high standards of moral and ethical conduct. Inspirational motivation entails leaders inspiring and motivating followers through a compelling vision of the future, fostering commitment and purpose. Intellectual stimulation encourages creativity and critical thinking, challenging the status quo and promoting an environment conducive to innovation (Shafi, Zoya, Lei, Song, & Sarker, 2020). Individualized consideration demonstrates genuine concern for individual needs, providing support and mentorship to facilitate personal and professional growth. In the realm of the impact of digital leadership on employee innovative behavior, Transformational Leadership theory is highly relevant (Rabiul & Yean, 2021). It aligns with fostering a culture of innovation by encouraging creativity, supporting idea exploration and generation, inspiring idea championing and implementation, and contributing to the development of a digital-ready organizational culture (Verma, Kumar, Yalcin, & Daim, 2023). This theory provides a valuable framework for understanding how leadership behaviors influence and enhance employee innovative behavior in the dynamic landscape of the digital age.

Digital Leadership Style and Employee Innovative Behavior

The literature on the impact of digital leadership style on employee innovative behavior reveals a growing interest in understanding how leadership in the digital era influences organizational outcomes. Digital leadership is characterized by the ability of leaders to leverage technology, foster a culture of adaptability, and navigate the complexities of the digital landscape (Kör, Wakkee, & van der Sijde, 2021). This leadership style is seen as essential for organizations seeking to thrive in an environment marked by rapid technological advancements and increased connectivity: several studies have highlighted the positive relationship between digital leadership and employee innovative behavior. For instance, Faulks, Song, Waiganjo, Obrenovic, and Godinic (2021) found that leaders who embrace digital technologies and integrate them into their leadership practices create an environment conducive to idea exploration. Digital leaders are adept at encouraging employees to seek novel solutions, experiment with new approaches, and explore unconventional ideas. This aligns with the notion that digital leadership fosters a climate of innovation, in which risk-taking is encouraged and learning from failure is valued (Tagscherer & Carbon, 2023) in addition to idea exploration, the impact

of digital leadership extends to other stages of the innovation process. Research by Suwignjo, Gunarta, Wessiani, Prasetyo, and Yuwana (2022) suggests that digital leaders play a crucial role in stimulating idea generation among employees, by promoting open communication channels and providing platforms for collaborative idea generation, digital leaders contribute to a dynamic idea exchange within the organization. This finding underscores the multifaceted nature of digital leadership, highlighting its influence not only on the individual behavior of employees but also on collective creative processes. Furthermore, the literature emphasizes the importance of digital leadership in championing and implementing innovative ideas. A study by Faulks et al. (2021) posits that digital leaders are effective advocates for innovative initiatives, leveraging their digital acumen to communicate the strategic importance of novel ideas to various stakeholders. Moreover, digital leaders are instrumental in driving the implementation of innovative solutions by aligning organizational resources, creating a supportive infrastructure, and ensuring that digital capabilities are leveraged to bring ideas to fruition (Joshi, Benitez, Huygh, Ruiz, & De Haes, 2022). While the positive association between digital leadership and employee innovative behavior is evident, recent research has started to explore the underlying mechanisms that mediate this relationship. One such mechanism is emotional intelligence, which refers to the ability to understand and manage one's emotions and the emotions of others (Jang, Elfenbein, & Porath, 2023). Emotional intelligence is posited to mediate the impact of digital leadership on employee innovative behavior by influencing the way leaders foster a positive and supportive climate for creativity and risk-taking (Yang, Weng, Li, & Wu, 2022). Moreover, the literature highlights the mediating role of employee digital capability in the relationship between digital leadership and innovative behavior. Employee digital capability encompasses the skills and competencies required to effectively use digital technologies (Chatterjee, Chaudhuri, Vrontis, & Giovando, 2023). Leaders who nurture and enhance the digital capabilities of their workforce contribute to a more technologically proficient and innovative organizational culture.

H1: There is a significant and positive relationship between digital leadership style and employee innovative behavior.

Emotional Intelligence as a Mediator

The mediating role of emotional intelligence in the relationship between digital leadership style and employee innovative behavior has garnered substantial attention in contemporary organizational research. Digital leadership,

characterized by the ability to navigate and harness digital technologies effectively, has been identified as a key factor in fostering innovation within organizations (Biju, Wanat, El-Desoky, Vu, & Varkey, 2023). Concurrently, emotional intelligence, defined as the capacity to perceive, understand, and regulate emotions, is recognized as a critical competency influencing interpersonal dynamics and individual behavior in the workplace. Recent studies suggest that emotional intelligence serves as a mediating mechanism that facilitates the translation of digital leadership into enhanced employee innovative behavior. One aspect of emotional intelligence that plays a crucial role in this context is leaders' ability to create a positive emotional climate within the organization (Ruble, Cole, Weiss, Clayton, & Weiss, 2022). Digital leaders, by virtue of their proficiency in leveraging technology, are well-positioned to establish collaborative and inclusive digital environments, fostering a sense of psychological safety that is conducive to creativity and innovation (Schiuma, Schettini, & Santarsiero, 2021). Moreover, the mediation role of emotional intelligence becomes evident in the way digital leaders handle interpersonal relationships. The capacity to recognize and manage one's emotions, as well as the emotions of others, enhances the leader's effectiveness in inspiring and motivating employees toward innovative endeavors (Coronado-Maldonado & Benítez-Márquez, 2023). Emotional intelligence enables digital leaders to empathize with the challenges employees may face during the innovation process, leading to a more supportive and adaptive leadership style that encourages risk-taking and experimentation (Kuday & Erdoğan, 2023). Research findings also suggest that emotional intelligence acts as a bridge between the strategic vision of digital leaders and the manifestation of innovative behavior among employees. Digital leaders with high emotional intelligence are adept at communicating a compelling vision for the future, inspiring a shared sense of purpose and commitment among team members (Arif, Johnston, Lane, & Beatson, 2023). This emotional resonance, in turn, is linked to increased engagement in innovative activities as employees align their efforts with the broader goals set forth by digitally savvy leaders. However, it is essential to recognize the nuanced nature of the relationship between emotional intelligence and innovative behavior within the digital leadership context. While emotional intelligence can amplify the positive effects of digital leadership on innovation; it may not entirely mitigate the challenges associated with organizational change and technological adoption (Chatterjee, Chaudhuri, Vrontis, & Jabeen, 2022). Thus, the mediating role of emotional intel-

ligence should be considered within the broader organizational context, acknowledging the interplay of various factors influencing innovation outcomes.

H2: Emotional intelligence mediates the relationship between digital leadership style and employee innovative behavior.

Employee Digital Capability as a Mediator

The mediating role of employee digital capability in the relationship between digital leadership style and employee innovative behavior represents a critical area of investigation within the context of the contemporary digitalized workplace. Digital leadership, characterized by the adept use and integration of technology in leadership practices, has been acknowledged as a pivotal factor influencing organizational innovation (Chatterjee et al., 2023). Simultaneously, employee digital capability, encompassing the skills and competencies necessary to navigate and utilize digital technologies effectively, plays a crucial role in shaping how individuals and teams engage with innovative processes (Margherita, 2022). Scholarly research indicates that digital leaders, through their proficiency in leveraging technology, contribute to the development and enhancement of employee digital capabilities. Leaders who embrace digital leadership styles are instrumental in creating a technologically enabled organizational culture, fostering a climate in which employees feel empowered and equipped to leverage digital tools for innovative purposes (Afrianty et al., 2022). This alignment between digital leadership and employee digital capability sets the stage for a more dynamic and technologically adaptive workforce. Moreover, employee digital capability emerges as a mediating factor in the relationship between digital leadership and different dimensions of employee innovative behavior. In the initial stages of idea exploration, digital leaders who promote and support the development of digital capabilities among their teams provide the foundation for employees to explore novel ideas and solutions using digital tools (Saputra, Sasanti, Alamsjah, & Sadeli, 2022). This integration of digital capabilities not only facilitates idea generation but also enhances the overall agility and adaptability of the workforce. In the subsequent stages of the innovation process, such as idea championing and implementation, employee digital capability continues to mediate the impact of digital leadership. The ability to back innovative ideas and implement them successfully often requires a workforce with the necessary digital skills to execute and adapt to technological changes (Joshi et al., 2022). Digital leaders who prioritize the enhancement of employee digital capability contribute to a more agile and

innovation-ready workforce, capable of translating creative concepts into tangible outcomes. However, it is essential to recognize that the relationship between digital leadership, employee digital capability, and innovative behavior is not unidirectional. Employee digital capability may also influence the effectiveness of digital leadership by shaping the receptivity of individuals to digital initiatives and their ability to align with the organizational vision (Yee, Al Mamun, Xueyun, Hussain, & Yang, 2023). This reciprocal relationship highlights the dynamic interplay between leadership practices and the digital readiness of the workforce.

H3: Employee digital capability mediates the relationship between digital leadership style and employee innovative behavior.

Based on the above literature and discussion, we developed the following conceptual framework, as shown in Figure 1
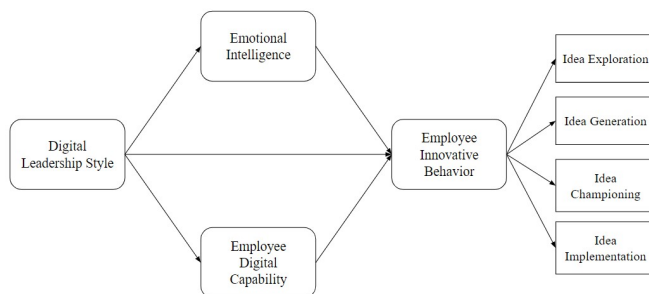

FIGURE 1. Conceptual framework

METHODOLOGY

A quantitative research design was employed to investigate the relationships between digital leadership style, emotional intelligence, employee digital capability, and innovative behavior. This approach facilitated the collection of numerical data, allowing for statistical analysis and testing of hypotheses. The population for this study consists of employees across various industries in Albania, reflecting the diverse workforce impacted by digital leadership practices. The sample size was determined using the rule of thumb for regression analysis, which recommends a minimum of 10 observations per predictor variable. With a conceptual framework involving four main variables, a sample size of 203 was deemed adequate for robust statistical analysis. A random sampling technique was employed to ensure that each member of the population had an equal chance of being included in the sample. This approach

aimed to enhance the generalizability of the findings to the broader population of employees in Albania. Data were collected through an online questionnaire, considering the widespread use of digital communication channels and the convenience it offers to participants. The questionnaire included structured items corresponding to the study variables, allowing for systematic data collection. The measures employed in this study encompass validated scales to assess key constructs. The digital leadership style is measured using 6 items scale adapted from the work of (Shin, Mollah, & Choi, 2023). Employee innovative behavior was measured using 10-items, scales from (Erhan, Uzunbacak, & Aydin, 2022; Jam, Khan, Zaidi, & Muzaffar, 2011). Emotional intelligence was measured using 5-items scales from (Law, Wong, & Song, 2004). The 16-items scales from Shin et al. (2023) were adopted to measure employee digital capability. Statistical analysis was conducted using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics were employed to summarize the demographic characteristics of the sample. To test the hypotheses and explore the relationships between variables, inferential statistics such as correlation analysis and regression analysis were conducted using SPSS. Mediation analysis was employed to examine the mediating roles of emotional intelligence and employee digital capability in the relationship between digital leadership style and employee innovative behavior.

RESULTS

Table 1 presents descriptive statistics for four key variables: digital leadership skills, employee innovative work behavior, employee digital capability, and emotional intelligence. The data, based on a sample of 203 participants, reveal the range (Min to Max), mean, standard deviation, skewness, and kurtosis for each variable. Digital leadership skills exhibit a mean of 4.19 with a standard deviation of 0.841, indicating a relatively high level of competence. Employee innovative work behavior is characterized by a mean of 4.11 and a lower standard deviation of 0.616, suggesting a more concentrated distribution. Employee digital capability shows a mean of 3.90 and a slightly negatively skewed distribution (-0.715). Emotional intelligence demonstrates a mean of 4.00 with a moderate standard deviation of 0.693. These statistics provide a comprehensive overview of the central tendency, variability, and distributional characteristics of the measured variables in the study.

TABLE 1. Descriptive statistics

	N	Mini	Maxi	Mean	Std. Deviation	Skewness	Kurtosis
Digital Leadership Skills	203	1	5	4.19	0.841	-1.364	1.947
Employee Innovative Work Behavior	203	1	5	4.11	0.616	-0.877	1.075
Employee Digital Capability	203	1	5	3.90	0.798	-0.715	0.526
Emotional Intelligence	203	1	5	4.00	0.693	-0.702	0.434

Table 2 presents the correlation matrix among the variables. The matrix reveals significant positive correlations between digital leadership skills and innovative work behavior (r = 0.711, p < 0.01), indicating a strong association. Similarly, a positive correlation is observed between digital leadership skills and employee digital capability (r = 0.450, p < 0.01), suggesting a link between the two. Moreover, strong positive correlations are found between innovative work behavior and emotional intelligence (r = 0.773, p < 0.01) and between employee digital capability and emotional intelligence (r = 0.740, p < 0.01), emphasizing the interconnectedness of these variables. These findings underscore the importance of considering these relationships in the context of organizational dynamics and suggest potential areas for further investigation.

TABLE 2. Correlation matrix

	DLS	EIWB	DIEC	EI
Digital Leadership Skills	1			
Employee Innovative Work Behavior	.711**	1		
Employee Digital Capability	.450**	.744**	1	
Emotional Intelligence	.565**	.773**	.740**	1

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

Table 3 displays the computed Cronbach's alpha coefficients for the measured variables in the study. Digital leadership skills exhibit a high internal consistency with a Cronbach's alpha of 0.915, indicating a solid reliability of the scale in assessing this construct. Similarly, Employee innovative work behavior demonstrates robust internal reliability with a Cronbach's alpha of 0.865, suggesting the consistency of responses across items measuring innovative work behavior. Employee digital capability also shows a commendable level of internal consistency, as reflected by a Cronbach's alpha of 0.888. This suggests a reliable measurement of employee digital capability through the employed scale. Additionally, Emotional intelligence records the highest Cronbach's alpha among the variables, standing at 0.939, signaling excellent internal consistency and reliability for the scale measuring emotional intelligence. These high Cronbach's alpha coefficients across all variables provide confidence in the reliability of the measurement instruments and support the validity of the data collected for each construct.

TABLE 3. Cronbach's alpha

Variable	Cronbach's Alpha
Digital Leadership Skills	0.915
Employee Innovative Work Behavior	0.865
Employee Digital Capability	0.888
Emotional Intelligence	0.939

Table 4 shows the results of the Confirmatory Factor Analysis (CFA) for the variables, providing insight into the relationships between latent constructs and their respective indicators. Digital leadership skills are indicated by items DLS1 to DLS6, each showing substantial factor loadings ranging from 0.697 to 0.75, indicating a solid association between the observed variables and the underlying construct. Similarly, employee innovative work behavior exhibits robust factor loadings (ranging from 0.564 to 0.756) across indicators EIWB1 to EIWB10, reflecting a reliable measurement of innovative work behavior. Employee digital capability demonstrates strong factor loadings (ranging from 0.723 to 0.805) for indicators EDC1 to EDC5, confirming a solid representation of employee digital capabil-

ity. Emotional intelligence is captured by items EI1 to EI16, each displaying significant factor loadings, ranging from 0.585 to 0.805, indicating a reliable and valid measurement of emotional intelligence. These findings provide support

for the the construct validity of the measurement model, reinforcing the relationships between latent constructs and their respective indicators.

TABLE 4. Confirmatory factor analysis

Variable	Indicator	Loading
Digital Leadership Skills	DLS1	0.733
	DLS2	0.697
	DLS3	0.699
	DLS4	0.701
	DLS5	0.75
	DLS6	0.724
Employee Innovative Work Behavior	EIWB1	0.656
	EIWB2	0.642
	EIWB3	0.564
	EIWB4	0.692
	EIWB5	0.628
	EIWB6	0.75
	EIWB7	0.681
	EIWB8	0.755
	EIWB9	0.756
	EIWB10	0.737
Employee Digital Capability	EDC1	0.726
	EDC2	0.795
	EDC3	0.766
	EDC4	0.805
	EDC5	0.723
Emotional Intelligence	EI1	0.691
	EI2	0.729
	EI3	0.728
	EI4	0.805
	EI5	0.748
	EI6	0.778
	EI7	0.617
	EI8	0.585
	EI9	0.771
	EI10	0.632
	EI11	0.775
	EI12	0.656
	EI13	0.717
	EI14	0.718
	EI15	0.651
	EI16	0.784

Table 5 presents the R-square statistics for three key variables in the study, shedding light on the proportion of variance in each variable explained by their respective indica-

tors. employee innovative work behavior demonstrates a substantial R-square of 0.506, indicating that over 50% of the variability in innovative work behavior is accounted for

by the employed indicators. This suggests that the selected items effectively capture and explain a significant portion of the variance within the construct of employee innovative work behavior. Similarly, emotional intelligence displays an R-square of 0.320, signifying that 32% of the variability in emotional intelligence is explained by the set of indicators used. This underscores the reliability and explanatory power of the selected items in measuring emotional intelligence. In contrast, employee digital capability exhibits a lower R-square of 0.203, implying that approximately 20%

of the variability in employee digital capability is explained by the chosen indicators. While this suggests a moderate level of explanatory power, it also indicates that there may be other factors contributing to the variability in employee digital capability that are not accounted for by the current set of indicators. These R-square statistics offer valuable insights into the adequacy of the measurement model for each variable and provide guidance for potential refinements in future research or instrument development.

TABLE 5. R-square statistics

Variable	R Square
Employee Innovative Work Behavior	0.506
Employee Digital Capability	0.203
Emotional Intelligence	0.320

Table 6 shows the results of the regression analysis, specifically examining the relationship between digital leadership skills and employee innovative work behavior. The path coefficient (beta) for the digital leadership skills and employee innovative work behavior relationship is 0.521, indicating a positive and significant influence of digital leadership skills on employee innovative work behavior—the standard error of 0.036 suggests a relatively precise estimation of the path coefficient. The t-value of 14.345 is well above the critical threshold, further confirming the statistical significance of the relationship. Additionally, the p-value

of 0.000 indicates that the observed relationship is highly significant at conventional significance levels. In practical terms, this suggests that for every one-unit increase in digital leadership skills, there is a 0.521-unit increase in employee innovative work behavior. These findings provide robust empirical support for the positive impact of digital leadership skills on fostering innovative work behavior among employees, underscoring the managerial implications of nurturing such skills within organizational leadership.

TABLE 6. Regression analysis

Path Relation	Beta	Std. Error	t - Value	p -Values
DLS -> EIWB	0.521	0.036	14.345	0.000

Table 7 unveils the outcomes of the mediation analysis, delving into the mediating roles of emotional intelligence and employee digital capability in the relationship between digital leadership skills and employee innovative work behavior. In the first mediation path, the beta coefficient stands at 0.440, indicating a significant positive indirect effect of digital leadership skills on employee innovative work behavior through the mediating influence of emotional intelligence. The associated standard error of 0.052 suggests a reasonably precise estimation of the mediation effect. The t-value of 7.146 is well above the critical threshold, and the p-value of 0.000 attests to the statistical significance of this mediated relationship. This implies that part of the influence of digital leadership skills on innovative work behavior is channeled through the enhancement of emotional

intelligence. Similarly, in the second mediation path, the beta coefficient is 0.225, signifying a significant positive indirect effect of digital leadership skills on employee innovative work behavior through the mediating role of employee digital capability.

The standard error of 0.040 indicates a precise estimation, and the t-value of 9.719, along with a p-value of 0.000, underscores the statistical significance of this mediated relationship. These results suggest that digital leadership skills impact innovative work behavior not only directly but also indirectly through the sequential influence of emotional intelligence and employee digital capability, highlighting the intricate pathways through which leadership practices contribute to fostering innovation within the organizational context.

TABLE 7. Mediation analysis

Path Relation	Beta	Std. Error	t - Value	p - Values
DLS -> EI -> EIWB	0.440	0.052	7.146	0.000
DLS -> EDC -> EIWB	0.225	0.040	9.719	0.000

DISCUSSION

In modern rapidly evolving technological and digital environment, leadership behaviors have a crucial impact on how organizations operate, especially when it comes to fostering innovation. This discussion explores the complex connections suggested in the study's hypotheses, with the goal of understanding the various ways in which digital leadership style affects employee innovative behavior. In the digital age, it is crucial for enterprises to comprehend the mediating functions of emotional intelligence and employee digital capacity in order to develop effective leadership strategies. This study tries to analyze and explain the theoretical foundations and empirical facts that support the hypotheses of the research. It provides vital insights into the current discussion on leadership in today's dynamic and technology work settings. H1 proposes a significant and positive relationship between digital leadership style and employee innovative behavior. The justification for this hypothesis lies in the evolving nature of leadership in the digital age. Sapta, Sudja, Landra, and Rustiarini (2021) argue that digital leadership involves leveraging technology to create agile and innovative organizational cultures. Leaders who embrace a digital leadership style are more likely to foster an environment that encourages creativity, experimentation, and a forward-thinking approach (Aránega et al., 2023). Therefore, it is reasonable to expect that a positive correlation exists between the degree of digital leadership within an organization and the innovative behavior of its employees. Moreover, the literature suggests that digital leaders play a pivotal role in shaping the minds and behaviors of their teams. Leaders who effectively use digital technologies set an example for employees, demonstrating the importance of staying abreast of technological advancements and integrating them into work processes (Khalid, Abdul Hamid, Raza, Promsivapallop, & Valeri, 2023). This influence extends to promoting a culture where employees feel empowered to explore new ideas and contribute to the innovation process. The positive relationship between digital leadership and employee innovative behavior is, therefore, grounded in the leadership's ability to instill a forward-thinking and tech-savvy mindset across the organization. Additionally, digital leadership's positive impact on employee innovative behavior can be understood through the lens of organizational adaptability. As organizations navigate the rapidly changing digital landscape, leaders who exhibit a digital leadership style are better equipped to guide their teams through technological transformations (AlNuaimi, Singh, Ren, Budhwar, & Vorobyev, 2022). This adaptability extends to fostering a climate that embraces change, encouraging employees to proactively engage in innovative activities to meet the challenges and opportunities presented by the digital environment.

H2 posits that emotional intelligence mediates the relationship between digital leadership style and employee innovative behavior. This hypothesis is grounded in the understanding that emotional intelligence plays a crucial role in shaping interpersonal dynamics and influencing individual behavior within the workplace (Ali, Qaseem, & Ali, 2019). Digital leaders, who are proficient in leveraging technology, are expected to integrate emotional intelligence into their leadership practice, creating a positive and supportive environment conducive to innovation. Empirical evidence suggests that emotionally intelligent leaders are adept at fostering a climate of trust, collaboration, and open communication (Cherukunnath & Singh, 2022). Such a climate is essential for cultivating innovative behavior as employees feel psychologically safe to express ideas, take risks, and engage in creative problem-solving (Shariq, Mukhtar, & Anwar, 2019). Therefore, it is reasonable to posit that emotional intelligence acts as a mediator in the relationship between digital leadership style and employee innovative behavior by influencing the emotional climate within the organization. Furthermore, emotional intelligence is linked to the leader's ability to inspire and motivate their team members. Leaders who exhibit emotional intelligence are more likely to communicate a compelling vision for the future, creating a shared sense of purpose among employees (Kumar & Martin, 2023). In the context of digital leadership, this visionary communication is essential for aligning the workforce with organizational goals, especially as they pertain to innovative initiatives. Therefore, emotional intelligence becomes a crucial factor in mediating the impact of digital leadership on inspiring and motivating employees towards innovative behaviors. Moreover, digital leaders with high emotional intelligence are better equipped to handle the emotional aspects of organizational change and the challenges associated with technolog-

ical advancements (Fernández-Martínez, Sutil-Rodríguez, & Liébana-Presa, 2023). As digital transformations become increasingly prevalent, leaders need to navigate the emotional landscape of their teams to ensure a smooth transition and maintain a positive outlook towards innovation.

H3 proposes that employee digital capability mediates the relationship between digital leadership style and employee innovative behavior. This hypothesis is grounded in the understanding that, in the digital age, the competence and proficiency of employees in utilizing digital tools and technologies play a crucial role in influencing their innovative behavior (Elshaer & Sobaih, 2022). Digital leaders are expected to cultivate a digitally capable workforce, creating an environment where employees are empowered to leverage technology for innovative purposes. The literature suggests that digital leaders contribute significantly to the development of employee digital capabilities by fostering a culture that values and prioritizes technological proficiency (Kör et al., 2021). By integrating digital tools into leadership practices, digital leaders set an example for employees and create expectations for a technologically adept workforce. This alignment between digital leadership style and employee digital capability forms the basis for the proposed mediation effect. Moreover, the positive impact of digital leadership on employee innovative behavior is contingent upon the digital capabilities of the workforce. As organizations strive for digital transformation, leaders who actively promote and enhance the digital skills of their employees contribute to a more adaptable and innovation-ready workforce (Chatterjee et al., 2022; Sultana & Islam, 2015). Employees with enhanced digital capabilities are better positioned to engage in idea exploration, generation, championing, and implementation, contributing to the overall innovative behavior of the organization. Furthermore, the mediation effect of employee digital capability is evident in its role in facilitating the implementation of innovative ideas. Digital leaders who prioritize the development of digital capabilities create a workforce that is not only creative but also proficient in translating ideas into actionable outcomes through the effective use of digital tools (Saputra et al., 2022). This alignment between digital leadership, employee digital capability, and the implementation of innovative ideas substantiates the proposed mediation effect.

CONCLUSION

In conclusion, this study has explored the intricate dynamics of digital leadership style and its impact on employee innovative behavior, considering the mediating roles of emotional intelligence and employee digital capability.

The findings of this research contribute valuable insights to the evolving landscape of organizational leadership in the digital age. Digital leadership emerges as a significant catalyst for fostering innovative behavior among employees, influencing their ability to explore, generate, champion, and implement ideas. The mediating effects of emotional intelligence underscore the importance of cultivating a positive emotional climate, while the mediating role of employee digital capability highlights the critical link between leadership practices and the technological proficiency of the workforce. As organizations strive for digital transformation, understanding these relationships becomes paramount for effective leadership strategies and the cultivation of innovative cultures within the rapidly changing digital landscape. These findings offer practical implications for organizations seeking to optimize their leadership practices and empower their workforce to thrive in an era marked by technological advancements and a continual need for innovation.

Implications

Theoretical implications:

The study's findings contribute significantly to the theoretical landscape of digital leadership and organizational innovation. The demonstrated positive relationship between digital leadership style and employee innovative behavior validates the growing importance of digital leadership in today's dynamic work environment. This substantiates existing theories by providing empirical evidence of how leaders who effectively leverage technology foster a culture of innovation within their organizations. This study also expands current digital leadership frameworks by introducing emotional intelligence and employee digital capability as mediating factors, offering a more nuanced understanding of the complex dynamics at play. On a practical level, organizations can leverage these theoretical insights to inform their leadership development initiatives. This study suggests that cultivating digital leadership skills, emotional intelligence, and employee digital capability should be prioritized in such programs. This aligns with the evolving demands of the digital era, where leaders need a multifaceted skill set to drive innovation effectively. By integrating these insights into leadership development practices, organizations can better prepare their leaders for the challenges and opportunities presented by the digital landscape. Furthermore, the study's practical implications extend to human resource practices. Organizations aspiring to foster a culture of innovation can strategically recruit, select, and train individuals with digital leadership attributes and a commitment

to enhancing digital capabilities. This strategic approach ensures that the workforce aligns with the organization's goals for digital transformation, creating a synergy between leadership and employee skills. This study underscores the importance of organizational culture and climate in driving innovation. Leaders can use these insights to foster a positive emotional climate, encouraging employees to feel empowered and supported in contributing innovative ideas. This aligns with the understanding that a conducive organizational culture is a key enabler of innovation. Organizations can use this knowledge to refine their cultural initiatives and ensure that innovation is embedded in the fabric of the workplace. Additionally, this study emphasizes the significance of technological proficiency in translating digital leadership into tangible outcomes. Organizations are encouraged to invest in training programs and technological infrastructure to enhance the digital capabilities of their workforce. This investment not only aligns with the study's findings but also positions organizations for increased adaptability and competitiveness in the rapidly evolving digital landscape.

Limitations and Future Directions

The present study carries certain limitations that merit consideration. Firstly, the findings may lack generalizability beyond the specific industry or organizational context under investigation. Generalizing the results to diverse sectors or organizational structures should be approached cautiously, and future research could explore the hypotheses across different industries to ascertain the broader applicability of the identified relationships—a second limitation pertains to the cross-sectional design employed in this study. While the exploration of mediating roles provides valuable insights, the use of a cross-sectional approach limits the establishment of definitive causal relationships. Future research could employ longitudinal designs to capture the dynamic evolution of digital leadership, emotional intelligence, employee digital capability, and innovative behavior over time, offering a more nuanced understanding of their interplay. Measurement challenges present another constraint in this study. Despite using validated scales, the reliance on self-report measures introduces subjectivity and potential response bias. Future research could benefit from integrating multi-method approaches, such as observations or third-party assessments, to enhance the reliability and validity of the measurements used in investigating the relationships under consideration. Furthermore, the study focuses on emotional intelligence and employee digital capability as mediating factors, yet the mediation mechanisms may be more complex than captured in this research. Exploring the underlying processes through qualitative methods or investigating additional potential mediators could contribute to a more comprehensive understanding of how digital leadership style influences employee innovative behavior. Finally, external factors and contingencies that might impact the observed relationships were not extensively addressed in this study. Organizational culture, external market conditions, and other contextual variables could play a significant role. Future research should consider these external factors and employ a more holistic approach to contextualize the findings within the broader organizational and environmental landscape. Investigating how different contextual variables moderate the proposed relationships could contribute to a more nuanced and adaptable framework for understanding the impact of digital leadership on employee innovation.

REFERENCES

Afrianty, T. W., Artatanaya, I. G., & Burgess, J. (2022). Working from home effectiveness during Covid-19: Evidence from university staff in Indonesia. *Asia Pacific Management Review*, *27*(1), 50-57. doi:https://doi.org/10.1016/j.apmrv.2021.05.002

Alant, B. P., & Bakare, O. O. (2021). A case study of the relationship between smallholder farmers' ICT literacy levels and demographic data wrt their use and adoption of ICT for weather forecasting. *Heliyon*, *7*(3), 1-9. doi:https://doi.org/10.1016/j.heliyon.2021.e06403

Ali, Q. M., Qaseem, S., & Ali, H. F. (2019). Impact of personality characteristics on innovative work behavior through emotional labor in education sector of Pakistan. *European Online Journal of Natural and Social Sciences*, *8*(2 s), 70-85. doi:https://doi.org/10.2139/ssrn.3916890

AlNuaimi, B. K., Singh, S. K., Ren, S., Budhwar, P., & Vorobyev, D. (2022). Mastering digital transformation: The nexus between leadership, agility, and digital strategy. *Journal of Business Research*, *145*, 636-648. doi:https://doi.org/10.1016/j.jbusres.2022.03.038

Aránega, A. Y., Montesinos, C. G., & del Val Núñez, M. T. (2023). Towards an entrepreneurial leadership based on kindness in a digital age. *Journal of Business Research*, *159*, 113747. doi:https://doi.org/10.1016/j.jbusres.2023.113747

Arif, S., Johnston, K. A., Lane, A., & Beatson, A. (2023). A strategic employee attribute scale: Mediating role of internal communication and employee engagement. *Public Relations Review*, *49*(2), 102320. doi:https://doi.org/10.1016/j.pubrev.2023.102320

Behie, S. W., Pasman, H. J., Khan, F. I., Shell, K., Alarfaj, A., El-Kady, A. H., & Hernandez, M. (2023). Leadership 4.0: The changing landscape of industry management in the smart digital era. *Process Safety and Environmental Protection*, *172*, 317-328. doi:https://doi.org/10.1016/j.psep.2023.02.014

Biju, A., Wanat, M. A., El-Desoky, R., Vu, C., & Varkey, D. (2023). Evaluation of student emotional intelligence at various points in a pharmacy curriculum. *Currents in Pharmacy Teaching and Learning*, *15*(6), 573-580. doi:https://doi.org/10.1016/j.cptl.2023.06.005

Chatterjee, S., Chaudhuri, R., Vrontis, D., & Giovando, G. (2023). Digital workplace and organization performance: Moderating role of digital leadership capability. *Journal of Innovation & Knowledge*, *8*(1), 100334. doi:https://doi.org/10.1016/j.jik.2023.100334

Chatterjee, S., Chaudhuri, R., Vrontis, D., & Jabeen, F. (2022). Digital transformation of organization using AI-CRM: From microfoundational perspective with leadership support. *Journal of Business Research*, *153*, 46-58. doi:https://doi.org/10.1016/j.jbusres.2022.08.019

Cherukunnath, D., & Singh, A. P. (2022). Exploring cognitive processes of knowledge acquisition to upgrade academic practices. *Frontiers in Psychology*, *13*, 682628. doi:https://doi.org/10.3389/fpsyg.2022.682628

Coronado-Maldonado, I., & Benítez-Márquez, M.-D. (2023). Emotional intelligence, leadership, and work teams: A hybrid literature review. *Heliyon*, *9*(2023), 1-19. doi:https://doi.org/10.1016/j.heliyon.2023.e20356

Dehnavi, M., Estebsari, F., Kandi, Z. R. K., Milani, A. S., Hemmati, M., Nasab, A. F., & Mostafaie, D. (2022). The correlation between emotional intelligence and clinical competence in nurses working in special care units: A cross-sectional study. *Nurse Education Today*, *116*, 105453. doi:https://doi.org/10.1016/j.nedt.2022.105453

Elshaer, I. A., & Sobaih, A. E. E. (2022). I think I can, I think I can: Effects of entrepreneurship orientation on entrepreneurship intention of Saudi agriculture and food sciences graduates. *Agriculture*, *12*(9), 1454. doi:https://doi.org/10.3390/agriculture12091454

Erhan, T., Uzunbacak, H. H., & Aydin, E. (2022). From conventional to digital leadership: Exploring digitalization of leadership and innovative work behavior. *Management Research Review*, *45*(11), 1524-1543. doi:https://doi.org/10.1108/mrr-05-2021-0338

Faulks, B., Song, Y., Waiganjo, M., Obrenovic, B., & Godinic, D. (2021). Impact of empowering leadership, innovative work, and organizational learning readiness on sustainable economic performance: An empirical study of companies in Russia during the COVID-19 pandemic. *Sustainability*, *13*(22), 12465. doi:https://doi.org/10.3390/su132212465

Fernández-Martínez, E., Sutil-Rodríguez, E., & Liébana-Presa, C. (2023). Internet addiction and emotional intelligence in university nursing students: A cross-sectional study. *Heliyon*, *9*(9), 1-8. doi:https://doi.org/10.1016/j.heliyon.2023.e19482

Gonçalves, D., Bergquist, M., Alänge, S., & Bunk, R. (2022). How digital tools align with organizational agility and strengthen digital innovation in automotive startups. *Procedia Computer Science*, *196*, 107-116. doi:https://doi.org/10.1016/j.procs.2021.11.079

Jam, F. A., Khan, T. I., Zaidi, B. H., & Muzaffar, S. M. (2011). Political skills moderates the relationship between perception of organizational politics and job outcomes. *Journal of Educational and Social Research*, *1*(4), 57-70.

Jang, D., Elfenbein, H. A., & Porath, C. (2023). Who succeeds in a leadership course? Achievement is predicted by ability-tested but not self-reported emotional intelligence. *Social Sciences & Humanities Open*, *8*(1), 100566. doi:https://doi.org/10.1016/j.ssaho.2023.100566

Joshi, A., Benitez, J., Huygh, T., Ruiz, L., & De Haes, S. (2022). Impact of IT governance process capability on business performance: Theory and empirical evidence. *Decision Support Systems*, *153*, 113668. doi:https://doi.org/10.1016/j.dss.2021.113668

Khalid, R., Abdul Hamid, A. B., Raza, M., Promsivapallop, P., & Valeri, M. (2023). Innovation and organizational learning practices in tourism and hospitality sector: A gender-based perspective. *European Business Review*. doi:https://doi.org/10.1108/ebr-09-2022-0191

Kör, B., Wakkee, I., & van der Sijde, P. (2021). How to promote managers' innovative behavior at work: Individual factors and perceptions. *Technovation*, *99*, 102127. doi:https://doi.org/10.1016/j.technovation.2020.102127

Kuday, A. D., & Erdoğan, Ö. (2023). Relationship between emotional intelligence and disaster response self-efficacy: A comparative study in nurses. *International Emergency Nursing*, *70*, 101319. doi:https://doi.org/10.1016/j.ienj.2023.101319

Kumar, H., & Martin, A. (2023). Artificial Emotional Intelligence: Conventional and deep learning approach. *Expert Systems with Applications*, *212*, 118651. doi:https://doi.org/10.1016/j.eswa.2022.118651

Law, K. S., Wong, C.-S., & Song, L. J. (2004). The construct and criterion validity of emotional intelligence and its potential utility for management studies. *Journal of applied Psychology*, *89*(3), 483. doi:https://doi.org/10.1037/0021-9010.89.3.483

Lyu, J. (2023). How does digital leadership improve organizational sustainability: Theory and evidence. *Journal of Cleaner Production*, *434*, 140148. doi:https://doi.org/10.1016/j.jclepro.2023.140148

Margherita, A. (2022). Human resources analytics: A systematization of research topics and directions for future research. *Human Resource Management Review*, *32*(2), 100795. doi:https://doi.org/10.1016/j.hrmr.2020.100795

Miao, R., Yu, J., Bozionelos, N., & Bozionelos, G. (2023). Organizational career growth and high-performance work systems: The roles of job crafting and organizational innovation climate. *Journal of Vocational Behavior*, *143*, 103879. doi: https://doi.org/10.1016/j.jvb.2023.103879

Núñez, M. E., García, P. M., & Abbas, A. (2023). The mediating role of self-regulation between emotional intelligence and student performance in online global classroom-based Collaborative International Online Learning (COIL): Empirical evidence from four partner universities of Latin America. *Research in Globalization*, *7*, 100178. doi:https://doi.org/10.1016/j.resglo.2023.100178

Rabiul, M. K., & Yean, T. F. (2021). Leadership styles, motivating language, and work engagement: An empirical investigation of the hotel industry. *International Journal of Hospitality Management*, *92*, 102712. doi:https://doi.org/10.1016/j.ijhm.2020.102712

Ruble, M. J., Cole, J. D., Weiss, S. S., Clayton, R., & Weiss, L. (2022). The relationship between pharmacist emotional intelligence, occupational stress, job performance, and psychological affective well-being. *Journal of the American Pharmacists Association*, *62*(1), 120-124. doi:https://doi.org/10.1016/j.cptl.2023.06.005

Sapta, I. K. S., Sudja, I. N., Landra, I. N., & Rustiarini, N. W. (2021). Sustainability performance of organization: Mediating role of knowledge management. *Economies*, *9*(3), 97. doi:https://doi.org/10.3390/economies9030097

Saputra, N., Sasanti, N., Alamsjah, F., & Sadeli, F. (2022). Strategic role of digital capability on business agility during COVID-19 era. *Procedia Computer Science*, *197*, 326-335. doi:https://doi.org/10.1016/j.procs.2021.12.147

Schiuma, G., Schettini, E., & Santarsiero, F. (2021). How wise companies drive digital transformation. *Journal of Open Innovation: Technology, Market, and Complexity*, *7*(2), 122. doi:https://doi.org/10.3390/joitmc7020122

Shafi, M., Zoya, Lei, Z., Song, X., & Sarker, M. N. I. (2020). The effects of transformational leadership on employee creativity: Moderating role of intrinsic motivation. *Asia Pacific Management Review*, *25*(3), 166-176. doi:https://doi.org/10.1016/j.apmrv.2019.12.002

Shariq, S. M., Mukhtar, U., & Anwar, S. (2019). Mediating and moderating impact of goal orientation and emotional intelligence on the relationship of knowledge oriented leadership and knowledge sharing. *Journal of Knowledge Management*, *23*(2), 332-350. doi:https://doi.org/10.1108/jkm-01-2018-0033

Shin, J., Mollah, M. A., & Choi, J. (2023). Sustainability and organizational performance in South Korea: The effect of digital leadership on digital culture and employees' digital capabilities. *Sustainability*, *15*(3), 2027. doi:https://doi.org/10.3390/su15032027

Siangchokyoo, N., Klinger, R. L., & Campion, E. D. (2020). Follower transformation as the linchpin of transformational leadership theory: A systematic review and future research agenda. *The Leadership Quarterly*, *31*(1), 101341. doi:https://doi.org/10.1016/j.leaqua.2019.101341

Sultana, N., & Islam, M. A. (2015). Ubiquitous future M-health system including wireless 3G technologies in Bangladesh. *Journal of Advances in Technology and Engineering Research*, *1*, 22-29. doi:https://doi.org/10.20474/-jater1.1.3

Suwignjo, P., Gunarta, I. K., Wessiani, N. A., Prasetyo, A. E., & Yuwana, L. (2022). Framework for measuring process innovation performance at Indonesian state-owned companies. *Journal of Open Innovation: Technology, Market, and Complexity*,

8(2), 95. doi:https://doi.org/10.3390/joitmc8020095

Tagscherer, F., & Carbon, C.-C. (2023). Leadership for successful digitalization: A literature review on companies' internal and external aspects of digitalization. *Sustainable Technology and Entrepreneurship*, *2*(2), 100039. doi:https://doi.org/10.1016/j.stae.2023.100039

Verma, P., Kumar, V., Yalcin, H., & Daim, T. (2023). Organizational architecture of strategic entrepreneurial firms for digital transformation: A bibliometric analysis. *Technology in Society*, *75*, 102355. doi:https://doi.org/10.1016/j.techsoc.2023.102355

Xia, Y., Liu, X., Wang, X., Deng, H., Han, C., Liu, Z., & Tsai, S.-B. (2023). The power of role models in a team: The impact of lead entrepreneur's digital leadership on digital entrepreneurial success. *Information Processing & Management*, *60*(6), 103498. doi:https://doi.org/10.1016/j.ipm.2023.103498

Yang, H., Weng, Q., Li, J., & Wu, S. (2022). Exploring the relationship between trait emotional intelligence and adaptive performance: The role of situational strength and self-efficacy. *Personality and Individual Differences*, *196*, 111711. doi:https://doi.org/10.1016/j.paid.2022.111711

Yee, W. M., Al Mamun, A., Xueyun, Z., Hussain, W. M. H. W., & Yang, Q. (2023). Modelling the significance of psychological, social, and situational factors on work efficiency and the preference for working from home in Southeast Asia. *Heliyon*, *9*(2023), e17561. doi:https://doi.org/10.1016/j.heliyon.2023.e17561