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Role of Readiness to Change in the Relationship Between Workforce Agility and Digital Transformation:
A Two-Timeframe Study

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ABSTRACT

This paper uses dynamic capabilities theory to explore the role of readiness to change as mediator in the intricate relationship between workforce agility and digital transformation. A total of 161 usable responses were gathered in two-waves of surveys from Indian organizations. Structural equation modelling was utilized to rigorously test the research hypotheses. The results unearthed a noteworthy positive link between workforce agility and the readiness to change, and this readiness, in turn, significantly influenced digital transformation. Intriguingly, the study also unveiled a direct relationship between workforce agility and digital transformation. The findings contribute a valuable thread to the literature, as it seamlessly weaves the concept of workforce agility into the fabric of digital transformation with Industry 4.0 context. This study would empower HR managers with a deeper understanding of the workforce's mindset and their preparedness to navigate technological changes. Such insights are indispensable, as effective change implementation hinges on insightful leadership.

KEYWORDS

Digital Transformation, Industry 4.0, Readiness to Change, Strategic HRM, Workforce Agility

INTRODUCTION

In recent years, Industry 4.0 has propelled organizations toward digital transformation (DT) (Solberg et al., 2020). New methodologies and technological disruptions mark this transition, fundamentally altering the work landscape, as Industry 4.0 ushers in a new industrial paradigm (de Paula et al., 2023). Notably, global expenditures on DT surpassed (United States) US$1.59 trillion in 2021, accounting for more than 20% of the total spending in 2020. This surge is attributed to the increased utilization

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of cloud technologies in remote work. Projections estimate that global spending will soar to US$3.4 trillion by 2026, indicative of the substantial growth in the DT (Statista, 2022).

Research articles confirm an upswing in DT across various organizations (Wade et al., 2020; Westerman, 2022). As the Satell et al. (2021) reported, DT has evolved from merely a preference to an obligation, emerging as a prominent work trend (Weisman et al., 2023). Nevertheless, the adoption of DT varies based on an organization's revenue and profitability (Andriole, 2017; Magnusson et al., 2022). It is observed that DT profoundly impacts individuals, businesses, and systems (AlNuaimi et al., 2022; Zhao et al., 2023). DT is related to positive outcomes, as it reduces corruption among top management executives (Zhang & Guo, 2022) and helps enhance service quality (Li et al., 2022). To achieve DT, organizations are integrating cutting-edge technologies, such as artificial intelligence (AI), robotics, blockchain, and metaverse, to improve their systems, stimulate innovation, and sustain the competitive advantage (Li et al., 2022; Singh & Hess, 2017). These modifications of fundamental processes are done by utilizing data, communication, computing, and interconnectivity technologies (Vial, 2019).

DT is a strategic shift based on advanced technologies (Bresciani et al., 2021). It involves a comprehensive reorientation of the organization, encompassing the adoption of analytics, robotics, cloud computing, and social media services to deliver outcomes to shareholders, including employees (AlNuaimi et al., 2022; Bresciani et al., 2021). Within this context, DT is defined as "the transformation of business process, culture, and organizational aspects to meet market requirements, owing to digital technologies" (Nasiri et al., 2020). Importantly, DT typically progresses through discovery, development, demonstration, and deployment stages (Philippart, 2022). Studies suggest that DT capability is comprised of three components, namely, digital sensing, seizing, and digital reconfiguring (Teece, 2007; Xiao et al., 2023).

The ongoing technological revolution is reshaping work processes, emphasizing the vital role of human skills in booming DT initiatives (Cimini et al., 2020; Galati & Bigliardi, 2019). To meet this need, employees with strong digital skills must adapt to the rapidly changing work environment (Cagliano et al., 2019). A report underscores the significance of digital upskilling and reskilling, particularly in emerging economies such as India (Statista, 2023). Furthermore, a recent call for study focuses on exploring DT in developing or less developed countries like India to drive their prosperity (Kraus et al., 2022).

Given the central role of the workforce in any technological transition, it is essential to comprehend how workforce agility (WA) contributes to DT. Even if the relevance of DT is undeniable, companies continue to grapple with challenges in its implementation. Success in organizational DT hinges on the willingness of employees to adapt to change, as, for any DT to occur, assistance is necessary (AlNuaimi et al., 2022; Tabrizi et al., 2019). For example, big data analytics capability is a prerequisite competency involving massive data management, which helps achieve organizational agility, leading to organizational performance (Xie et al., 2022). Organizations' big data analytics capability can be achieved when their workforce can manage vast data. Hence, the influence of WA on DT, particularly considering the human resource (HR) perspective, takes centre stage.

Dynamic capabilities enable organizations to adapt by sensing and seizing new business opportunities (Teece, 2007; Winter, 2003). DT is the organizational effort targeted at embracing change and thus achieving a competitive edge. This transformation can be achieved when the internal workforce is integrated or developed to align with the objectives of the organization. However, external competencies, such as freelancing and crowdsourcing, can be reconfigured and leveraged effectively to ease DT initiatives. Employee proactivity in adopting new technologies is an example of WA that helps create dynamic capability for the organization, as it develops its ability to sense and respond to market changes effectively (Teece et al., 1997).

Scholars from multiple disciplines of management, including information systems, strategy, marketing, HRs, and operations, have examined the impact of DT from various theoretical angles (Baudet & Medina, 2023; Bresciani et al., 2021; Fletcher & Griffiths, 2020; Li et al., 2023; Loonam

et al., 2018; Malar et al., 2019; Narbariya et al., 2022). Instead of the increasing interest in the subject of DT, there remains a dearth of literature underscoring the centrality of DT. Therefore, given the increasing prominence of DT and limited research on the role of HR-related factors in aiding organizations to achieve a competitive advantage (da Silva et al., 2022), this topic merits further attention.

Consequently, in this study, the authors investigated how WA affects DT. The overarching objective was to analyze how WA influences DT through its readiness to adapt to change.

THEORETICAL BACKGROUND AND DEVELOPMENT OF HYPOTHESES

Digital Transformation and Workforce Agility

WA, a concept that originated in the 2000s, builds upon the earlier notion of "agility" that dates back to the 1950s (Breu et al., 2002). It evolved into organizational agility during the 1980s and 1990s, with a growing emphasis on agile practices within organizations (Kettunen, 2009). Initial research predominantly focused on organizations, but later studies recognized the critical role of the workforce in achieving organizational agility (Breu et al., 2002). Recent investigations have underscored the importance of employee agility within the broader concept of WA (Salmen & Festing, 2022). In this study, WA encompasses all employees in the workplace and is defined as "an organization's ability to respond rapidly to changes in the internal and external business environment and to act proactively concerning the changes to seize opportunities that become available due to the change" (Sherehiy et al., 2007). Also, agility is the practice that the organization adopts to changes in business circumstances. Therefore, WA refers to the organizational capability of promptly adapting to shifts in the business and employees grabbing the opportunity created by that change.

WA is achieved when employees possess intelligence, competence, collaboration, supportive culture, and information system proficiency (Breu et al., 2002). Studies indicate that psychological empowerment, job demands, and HR practices influence WA (Ajgaonkar et al., 2022; Muduli, 2016; Salmen & Festing, 2022). Notably, despite these advances in understanding the factors contributing to WA, more literature is needed to highlight the consequences of this critical concept.

Dynamic capabilities theory (DCT) refers to "the firm's ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments" (Teece et al., 1997). In this study, DCT posits that organizations utilize and revitalize their existing competencies and address the change in market demands to gain a competitive edge. Aligned with the tenets of DCT, organizations are taking deliberate steps to make their workforces flexible and adept at capitalizing on the opportunities linked with technological advancements, such as analytics, AI, and robotics (Teece et al., 1997). Prior studies substantiated the significant role of a capable workforce in enhancing the DT efforts in an organization (Bag et al., 2021). In addition, an agile workforce is open to the adoption of flexible work practices within the organization, showing a strategic alignment of HRs with the overarching objectives of the organization (Nicolás-Agustín et al., 2022).

While limited research directly connects WA to DT, studies have established a relationship between organizational agility and DT (AlNuaimi et al., 2022). A recent call suggests checking the applicability of agile approaches for adaptation to meet the needs of different industries (Duvivier & Gupta, 2023). Given this context, the authors propose the following hypothesis:

Hypothesis One (H1): WA has a positive influence on DT.

Workforce Agility and Readiness to Change

Readiness to change (RC) refers to "employees' beliefs, feelings, and intentions about their own and the organization's capacity for implementing a successful change and the extent to which that change will benefit those concerned" (Bouckenooghe, 2010). It represents the extent to which employees

contemplate their reactions towards any organizational change (Neves, 2009). Effective implementation of any organizational change hinges on the readiness of its employees (Vakola, 2013). Therefore, prioritizing employees and their agility at the organizational level is essential for driving successful change initiatives.

Agility is a central aspect of supply chain responsiveness (Kazancoglu et al., 2022), and similarly, it plays a vital role in shaping employees' responsiveness to change within an organization. WA is often characterized by adaptive and proactive components (Chonko & Jones, 2005; Muduli, 2016). This adaptability and proactivity enable employees to stay ready for anticipated and unexpected changes. Individual responses to change can be highly diverse, underscoring the importance of prioritizing employees in fostering positive perceptions, beliefs, and attitudes toward change. Existing studies assert that an agile workforce can only realize an agile organization (Bouckenooghe et al., 2021; Yousaf et al., 2022).

Applying the DCT, the authors understand that individuals can cultivate agility by leveraging their competencies to achieve a competitive edge in the ever-changing work environment (Saleh & Watson, 2017; Teece et al., 1997). Agile employees exhibit quick adaptability, flexibility in embracing change, and the ability to act swiftly (Rafferty & Minbashian, 2019). In capitalizing on the available competencies, employees take proactive measures to prepare themselves for changes like digitization and technology adoption. These proactive efforts and adaptability and resilience contribute to a more positive stance toward change. Based on the argument above, the authors posited:

Hypothesis Two (H2): WA has a positive influence on the employees' RC.

Readiness to Change and Digital Transformation

The literature demonstrates that RC influences change capabilities, behaviors that support change, cumulative performance, and group attitudes (Rafferty et al., 2013; Rafferty & Minbashian, 2019). Drawing on the DCT, information technology (IT) capabilities, adaptive capabilities, and flexibility help attain DT, allowing organizations to become change-oriented. Therefore, employees better adapt to the business processes using digital technologies to meet market requirements.

Studies have shown that the workforce's perception of the DT-oriented leadership behavior (Srivastava et al., 2023) affects their responses to change, including desirable (affective, cognitive, and behavioral) trust responses and undesirable (affective, cognitive, and behavioral) resistance to change (Weber et al., 2022). When the workforce perceives that their leaders are committed, proactively track digital trends, and have a clear digital strategy to achieve a digital vision, trust in their leadership is nurtured. For instance, when leaders provide work-related inputs, the workforce's cognitive trust in their leadership increases (Ling & Guo, 2020; Weber et al., 2022). Trust in leaders and a positive emotional climate drive RC for the success of the DT of the workplace (Dudezert et al., 2023).

Past research highlighted that digital readiness is a prerequisite for successful DT in an organization (Gfrerer et al., 2021). For a change to succeed, it must progress through the following stages: Readiness, adoption, and institutionalization (Armenakis et al., 1999). Thus, if the workforce is prepared for change, the organization can more easily drive change initiatives (Vakola, 2013). Moreover, when the workforce prepares to embrace change, it positively impacts DT initiatives. Hence, the authors hypothesized the following:

Hypothesis Three (H3): RC positively influences DT.

Readiness to Change as Mediator

The literature suggests that preparedness for change is an intermediary between three perceived self-determination factors, namely, competence, relatedness, and autonomy, and the execution of organizational changes (Rahi et al., 2022). This underscores the significance of employees having

self-determination and motivation to embrace changes. Consequently, organizations should integrate existing competencies into employee competence. When employees are perceived as lacking competence, they can be developed to enhance their agility and flexibility in adapting to change.

Aligned with DCT, proactive workers become better prepared to adjust to the alteration in the work environment, subsequently enhancing DT in the organization (Jager et al., 2022; Muduli, 2016). Agile workers empower organizations to embrace DT using technologies like robotics and the metaverse (Ancillai et al., 2023). However, when workers resist change due to the absence of digital mindsets, there is an influence on the overall DT process (Solberg et al., 2020). Agile workers are essential in aligning digital mindsets with DT objectives by embracing a culture of learning and innovation in the workforce (Solberg et al., 2020).

Existing literature suggests that WA is vital for successful DT, but this mechanism is further enhanced when workers possess a digital mindset and digital literacy (Zahoor et al., 2023). This reflects that workers must be ready to adopt and implement organizational digitalization changes. Individual digital readiness is paramount for adopting change initiatives in the DT (Gfrerer et al., 2021). The workforce's digital readiness, mindset, and skills are essential to DT. Digital readiness is achieved when workers are proactive and flexible. Hence, in line with the above discussion, the authors hypothesized the following:

Hypothesis Four (H4): RC mediates the relationship between WA and DT.

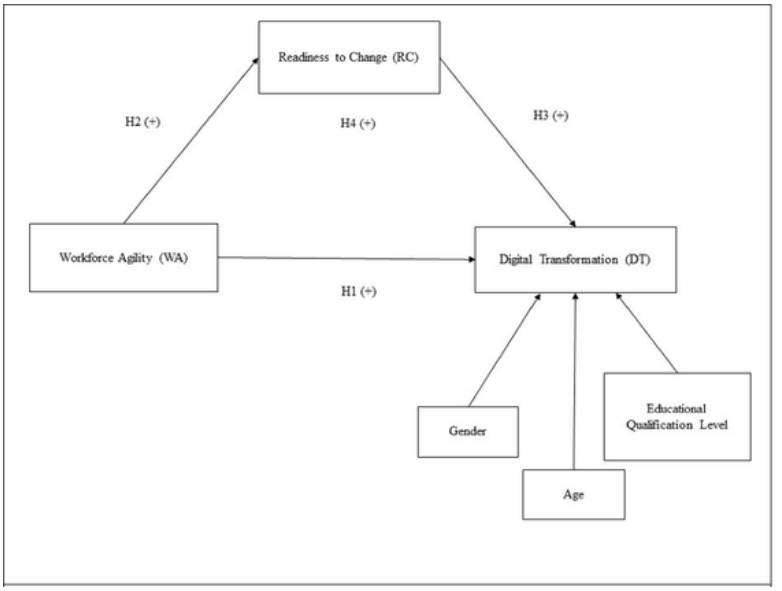
The authors developed a theoretical model by integrating the above hypotheses (Figure 1).

METHODS

Sample and Procedure

For this study, the researchers identified participants using convenience sampling methods from various industries in India. One of the authors distributed paper-and-pen-based structured questionnaires,

Figure 1. Research Model and Hypothesized Relationships (Note. Age, gender, and educational qualification level are the control variables)



ensuring the confidentiality and privacy of participants' details and responses. The authors informed the participants that their entries would be solely used for the research. The study included participants from diverse industries, such as manufacturing, IT, and consulting, to create a sample representative of Indian industries and better insight into the extent of DT across sectors. All the respondents who were part of the study held managerial positions in their respective firms.

The authors distributed a total of 256 questionnaires to the participants of various industries in India who were also participants in a Management Development Program at one of India's top-tier Business Schools. Research from a developing country such as India is precious for understanding DT. Spending on DT of businesses in India is assumed to rise at a compound annual growth rate of 17% in 2025 (US$ 23.6 billion) (International Data Corporation, 2022). Therefore, DT in India is still evolving.

The researchers mitigated common method biases by collecting data in two phases, with a four-week interval between them (Doty & Glick, 1998). In the first phase, they surveyed the participants about WA, demographic information, and control variables such as educational qualification level. In timeframe one, out of 256 participants, 207 completed and returned the questionnaire, resulting in an 80.86% response rate.

In timeframe two of the survey, the researchers investigated the participants for RC and DT. Then, they contacted again all employees who had completed and submitted questionnaires in the first survey. Of the 207 surveys sent, 184 were returned, resulting in an 88.89% response rate. Subsequently, the researchers excluded responses that did not pass the attention check and reverse-coded questions. After verification of the responses, they selected a final sample of 161 participants, considered adequate for a two-timeframe study (Baruch et al., 2020; Nsair & Piszczek, 2021). Of these 161 participants, 46.58% were men, and 53.42% were women, with most falling into the 21 to 25 years and 26 to 30 age groups. The average educational qualification level of the participants was graduation.

Measures

The authors collected all the responses from the participants using a five-point Likert scale (1, strongly disagree, to 5, strongly agree).

They measured WA on a seven-item scale adapted from Muduli (2016). Sample items included: "I am comfortable with change, new ideas, and new technologies in my organization; I am techno savvy and know of advanced manufacturing technologies, IT skills, and use of mobile technologies." WA's reliability score (α) was .85, within the acceptable limit of more than .70.

The authors measured RC on Miller et al.'s (1994) eight-item scale. Sample items were: "I would consider myself to be 'open' to the changes the work teams will bring to my work role; I think that the implementation of work teams will have a positive effect on how I accomplish my work." The reliability score (α) for RC was .88, within the acceptable limit of more than .70.

The researchers assessed DT on a five-item scale Nasiri et al. (2020) had adopted. Sample items to measure the DT were: "In my organization, we aim to digitalize everything that can be digitalized. In my organization, we aim to create more robust networking with digital technologies between the different business processes." WA's reliability score (α) was .85, within the acceptable limit of more than .70.

Control Variables

In this research, the authors controlled all the potential demographic variables influencing DT. As per the literature, demographic variables of individuals can impact the linkages in the study of RC for DT (Narbariya et al., 2022; Zahoor et al., 2023). Therefore, the authors controlled demographic variables such as age, gender, and educational qualification level.

The researchers measured age on an interval scale, with 1 representing 20 years or below, 2 representing 21-25 years, 3 representing 26-30 years, and 4 representing 31 years or above. They

measured the educational qualification level on the scale, where 1 is undergraduate, 2 is graduate, 3 is post-graduate, 4 is doctorate, and 5 is others. The gender of the respondent is 0, signifying male, and 1, signifying female.

Data Analysis

The researchers conducted statistical analyses to check for multicollinearity issues. They utilized the software SmartPLS4 to come up with results of partial least squares structural equation modelling (PLS-SEM) as given by Hair et al. (2019). AlNuaimi et al.'s (2022) and Singh et al.'s (2022) are among the few recent studies where the authors utilized PLS-SEM for producing reliable estimates using smaller samples (Chin et al., 1998).

Test for Common Method Variance

The data the authors collected mainly relied on self-reporting, which raises the problem of common method variance (CMV). To mitigate the issue of potential CMV, as per the recommendations of Podsakoff et al. (2003), the authors opted for two statistical techniques. Firstly, Harman's single-factor test could explain only 43.11% of the total variance, below the critical 50% threshold, as Harman and Harman (1976) and Podsakoff et al. (2003) suggested. Secondly, the authors assessed the variance inflation factor (VIF) using SmartPLS4, revealing a value below 5 for the inner model, that is, as Hair et al. (2019) recommended. As both the tests confirmed no CMV effect, the authors established that CMV was not an issue in this study.

Descriptive Statistics

Table 1 shows the mean, standard deviation (SD), and correlation coefficients for all the variables the authors used in the study. Moreover, all the values of correlation that they observed had the potential to provide support for hypothesized relationships among WA, RC, and DT. However, these significant correlations implied potential multicollinearity issues among the variables.

The authors examined the VIF to assess the multicollinearity. The VIF values of the inner model, encompassing the set of exogenous latent variables, were below the threshold of 5 for both RC->DT (3.289) and WA->DT (3.346), as per Hair et al.'s (2019) guidelines. Consequently, the authors indicated that the variables were free from multicollinearity issues.

Table 1. Mean, Standard Deviation, and Correlations

Descriptive statistics and correlations								
Variable	**Mean**	**SD**	**Gender**	**Age**	**Educational qualification level**	**DT**	**RC**	**WA**
Gender	0.53	0.50						
Age	2.88	0.85	-2.90**					
Educational qualification level	2.35	0.77	-0.015	0.282**				
DT	4.12	0.74	-0.009	0.113	-0.250**			
RC	3.91	0.67	-0.106	0.098	-0.159*	0.703**		
WA	3.92	0.67	-0.113	0.265**	0.010	0.586**	0.792**	

Note. *p<.05, **p<.01.

Table 2. Outer Loadings and VIF- Outer Loadings and Measurement Model

Factor loadings, multicollinearity statistics (VIF), and measurement model								
		DT	**RC**	**WA**	**VIF**	**α**	**CR**	**AVE**
DT	DT1	0.833			2.160	0.85	0.86	0.63
	DT2	0.627			1.301			
	DT3	0.800			1.980			
	DT4	0.813			2.066			
	DT5	0.863			2.348			
RC	RC1		0.771		1.955	0.88	0.88	0.55
	RC2		0.655		1.779			
	RC3		0.805		2.260			
	RC4		0.633		1.695			
	RC5		0.786		2.239			
	RC6		0.741		1.892			
	RC7		0.769		1.905			
	RC8		0.754		1.866			
WA	WA1			0.786	1.852	0.85	0.86	0.53
	WA2			0.703	1.629			
	WA3			0.777	1.916			
	WA4			0.760	1.802			
	WA5			0.667	1.465			
	WA6			0.757	1.900			
	WA7			0.612	1.395			

RESULTS

The Measurement Model

To gauge construct reliability, the researchers scrutinized internal consistency, considering both Cronbach's alpha (α) and composite reliability (CR or ρ_a) values. As Table 2 shows, all the values surpassed the acceptable limit of 0.7 (Hair et al., 2019), affirming the constructs' reliability.

In addition, as Table 2 and Figure 2 (in the Appendix) illustrate, the outer loadings exceeded 0.612, signifying the establishment of indicator reliability (Chin et al., 1998). This aligns to support the reliability of the constructs.

Further, Table 2 exhibites the average variance extracted (AVE) values for the three examined constructs, all surpassing the threshold of 0.5. This achievement signifies that convergent validity was successfully attained as Hair et al. (2017, 2019) recommended.

Scrutiny of the distinction between variables is vital to assess discriminant validity. As a result, the authors calculated the heterotrait-monotrait ratio for each variable. They found that the heterotrait-monotrait ratio for all the variables was below 0.90, indicating an adherence to the acceptable threshold Henseler et al. (2015) advised. Thus, the discriminant validity was sufficiently achieved.

Table 3. Predictive Capabilities

Model's predictive capabilities				
	R^2	Q^2	SRMR	NFI
DT	0.524	0.392	0.066	0.787
RC	0.660	0.655		

The Structural Model

The authors calculated the VIF value again to assess collinearity, but, this time, for the outer model. As Table 2, indicating the VIF, shows, all values were under 5, which is the maximum threshold. Therefore, the problem of multicollinearity did not exist, in this study (Hair et al., 2019).

The authors evaluated the model's predictive capabilities based on three key aspects: Coefficient of determination (R^2), predictive relevance (Q^2), and the model fit criterion, particularly the standardized root mean square residual (SRMR) values. For endogenous variables, DT and RC, they found the adjusted R^2 values to be 0.524 and 0.660, respectively (Table 3). These values indicate a moderate to substantial level of variance explained by the constructs, demonstrating that, when considered together, they accounted for 52.4% of the variance in DT (Hair et al., 2019). For Q^2, the authors assessed the Q^2 values using PLS Predict for the endogenous variables. The Stone-Geisser's Q^2 values were 0.392 for DT and 0.655 for RC. Since all Q^2 values exceeded 0, the model possesses Q^2 (Table 3) (Hair et al., 2019).

The authors calculated the goodness of fit index using the SRMR value. In this case, they observed an SRMR of 0.066, which is below the upper limit of 0.08, in consonance with Hair et al. (2019) and Henseler et al. (2016). Additionally, the researchers obtained the normed fit index (NFI) with a value of 0.787. NFI values between 0 and 1 are considered acceptable, and a value closer to 1 indicates a better fit (Table 3). Therefore, the model's predictive capabilities were established.

Hypotheses Testing: Direct Results of the Structural Model Testing

The authors examined their hypotheses using 5000 resamples with bootstrapping at a 95% confidence interval through SmartPLS Bootstrap.

Direct Relationship Analysis

Table 4 presents all the direct hypothesized relationships, including control variables. For direct effect, the results provided support for H1 (β=0.593; t=7.977; p<0.001), indicating that WA has a significant impact on DT. Furthermore, H2 was supported (β=0.814; t=18.727; p<0.001), revealing a positive and significant connection between WA and RC. Furthermore, H3 was supported (β=0.576; t=4.338; p<0.001), indicating a positive and significant relationship between RC and DT.

Mediation Analysis

As Table 4 shows, RC plays a significant mediating role in the established link between WA and DT. The results illustrated that the total effect of WA on DT is significant (β=0.593, t= 7.977, p<0.001). However, when the mediator (RC) is introduced, the direct impact of WA on DT becomes insignificant (β=0.119, t=0.856, p=0.392). The authors found the indirect effect of WA on DT through RC to be significant (β=0.473, t=3.797, p<0.001). Hence, H4 was supported, indicating a mediated relationship between WA and DT.

Table 4. Hypotheses Testing Results

		Relationships	*ß*	SE	*t*-value	*p*-value	LL	UL	Decision
H1		WA-> DT	0.593	0.074	7.977	0.000***	0.436	0.728	Supported
H2		WA-> RC	0.814	0.043	18.727	0.000***	0.699	0.877	Supported
H3		RC->DT	0.581	0.131	4.437	0.000***	0.331	0.848	Supported
H4	Total effect	WA-> DT	0.593***						Supported
	Direct effect	WA-> DT	0.119	0.139	0.856	0.392	-0.172	0.375	
	Indirect effect	WA->RC->DT	0.473	0.123	3.797	0.000***	0.250	0.729	
Control variables		Age->DT	0.105	0.061	1.721	0.085	-0.014	0.227	
		Educational qualification level->DT	-0.183	0.063	2.893	0.004***	-0.307	-0.059	
		Gender->DT	0.160	0.116	1.375	0.169	-0.070	0.383	

Note. ***p<.001, **p<.05.

DISCUSSION

The theoretical model the authors introduced in this study contributes to the mechanism of how RC acts as a mediator in the relationship between WA and DT for achieving a sustainable competitive advantage in the digital era. Prior studies examined the association between organizational agility and DT (AlNuaimi et al., 2022). However, limited attention was given to managing digital agility to enable DT, indicating a need for further investigation (Saura et al., 2023). Digital agility can be addressed when the workforce itself is made agile. This study illustrates the critical significance of WA in driving DT within organizations.

This study confirmed that WA positively influences DT (H1), which aligns with previous research (Bag et al., 2021). As the authors mentioned above, the result is in consonance with the DCT, which illustrates that organizations foster WA to gauge a competitive advantage. Agile employees can cope with unexpected challenges, which smoothens DT (Eisenhardt & Martin, 2000). An agile workforce enables the seamless integration of digital technologies across the organization and promotes collaboration for alignment with the organization's strategic objectives (Teece, 2007).

The study findings demonstrate that WA has a positive association with RC (H2). This finding is in consonance with Rafferty and Minbashian's (2019) study and DCT, highlighting how agile workers embrace change, especially with regard to technological advancements. Agile employees believe in proactive measures; therefore, they tend to acquire new skills and knowledge and try to capitalize on the available opportunities. Also, in line with the social exchange theory, employees develop RC due to their trust in their managers to achieve a positive outcome in the future. Even managers trust their employees to gauge efficient work and enhanced productivity. The growth in the mutual trust between the employee and the manager fosters a positive emotional connection; therefore, employees proactively prepare for the change (Cook et al., 2013; Emerson, 1976; Thakur & Srivastava, 2018).

The findings of the study demonstrate that RC has a positive association with DT (H3). This finding is in accordance with Gfrerer et al.'s (2021) research, elucidating employees' motivation for embracing any digital changes happening in their organization by adapting to the dynamic business environment in order to remain competitive. Organizations use technology to modify their operations and meet market demands, reinforcing the connection between RC and DT. Further, when

employees trust their leaders and align with them as a result of a positive emotional connection, their RC grows, which is pivotal to the success of DT (Dudezert et al., 2023). The IT department ensures the implementation of cutting-edge technologies such as AI, blockchain, and robots, as it requires extensive data management, making IT integral to any DT initiative. As such, when employees trust their leaders—particularly their IT managers—concerning any digital shift in the organization, the emotional connection between the employee and manager can foster acceptance of the transformation among the workforce.

Finally, the authors discovered that RC mediates the linkage between WA and DT (H4). These results align with earlier studies (Gfrerer et al., 2021; Zahoor et al., 2023) and DCT, illustrating that a flexible workforce must also exhibit an openness to change to achieve the organizational objective of DT. Managing the workforce ensures strengthening internal and external competencies and providing them with the necessary skills, education, experience, and digital infrastructure. This strategic approach mandates that organizations thrive in uncertain dynamics (Becker, 1962).

Implications for Theory

This study makes enormous contributions to the advancement of research in the domains of management information systems, psychology, strategy, and change management, mainly when related to DT. Existing literature highlighted the critical need to advance the authors' understanding of DT (Troise et al., 2022; Vial, 2019). Moreover, Srivastava et al. (2021) confirmed that technology adoption had been the central theme of the study in the information system research, indicating agility leading to digital technology adoption is a prominent idea to emphasize, especially in the areas of management information systems.

Further, the literature is silent on the mechanism illustrating how an agile workforce (i.e., HR-related antecedent) impacts DT. The authors addressed this gap in this study by introducing a mediator variable, RC. As a result, this research provides a theoretical foundation rooted in dynamic capability theory. It presents an innovative conceptual model that connects WA and DT via RC. Additionally, this study contributes to the limited literature in the IT area concerning outcomes of WA. It demonstrates that DT is an indirect consequence of WA, mediated by a RC. Studies focusing on agility and DT warrant exploration from diverse theoretical perspectives (AlNuaimi et al., 2022). Therefore, this research investigates the underlying mechanisms and explores the outcomes associated with WA.

Second, DT is a catalyst for consistent and rapid changes in the business (Vial, 2019). The positive relationship the authors identified between WA and DT suggests that greater WA fosters more DT in the workplace, primarily due to the proactive and flexible attributes associated with it. Flexible work practices that an employee undertakes to be proactive in their approach towards the work (Solberg et al., 2022) are pivotal in determining WA. Hence, this study extends the existing literature on employee flexibility and proactive work behavior, as employees actively engage in work practices such as job crafting to enhance their agility.

Third, the authors' contributions align with the current literature in strategic human resource management (HRM) and DCT by responding to the call for studies on enhancing employee capabilities to maintain synergy between HRM resources and capabilities (Apascaritei & Elvira, 2022). This synergy between HRM resources and capabilities is crucial for achieving strategic agility in an era of technological advancements. Agile employees represent the organizational capabilities whose willingness to embrace change initiatives, such as DT, contributes to overall strategic agility within the firm.

Finally, the authors extended the current literature on cultural dimension theory (Hofstede, 1984) by incorporating data from a developing nation, India. Significantly, individuals' readiness and maturity levels concerning DT and culture can vary among people in different nations; for instance, the culture in India differs from that of developed nations such as the United States (AlNuaimi et al., 2022). Cultural dimensions, such as uncertainty avoidance, might influence individuals' willingness to take or avoid risks associated with change initiatives such as DT in organizations in developing

countries such as India. Thus, the acceptance of DT is influenced by the cultural context to which the workforce belongs.

Implications for Practice

This study offers valuable insight for practitioners and managers seeking navigation in the intricacies of DT while fostering agility and readiness for change within their organizations. Firstly, this study empowers top management to navigate the implementation of DT better. It offers insights into the psychology of employees, either individually or in groups, enabling organizations to create a conducive environment for embracing recommended change initiatives (Thakur & Srivastava, 2018).

Secondly, the results elucidate that DT is a profound change that may be eased out if managers and supervisors intervene. HRs become strategic partners for processes and change agents for people (Conner & Ulrich, 1996), helping them drive DT by fostering RC. For the seamless adoption of DT, HR managers could interact with the IT department as the IT managers are aware of the challenges that the employees might encounter related to adopting digital technology. The sync between HR and the IT department is essential as IT enables efficient data management, and HR facilitates the execution of DT in organizations. However, the smooth transition towards digital technology transformation can be reduced due to organizational rigidity and fragmented IT (Duvivier & Gupta, 2023). Therefore, agile approaches and strategic approaches to technological adoption shall be developed in IT departments.

Thirdly, the study underscores the significance of fostering WA for successful DT. Agility is a cornerstone of DT success, and organizations should ensure their workforce is agile and ready to adjust to the technological changes in the business ambience (Henretta & Chopra-McGowan, 2017). Creating a learning culture within the organization is vital for instilling a digital mindset in the workforce and fostering DT (Neeley & Leonardi, 2022). Managers should consider employee buy-in for change and assess their learning capacity as essential factors before implementing transformation initiatives (Neeley & Leonardi, 2022).

Limitations and Future Research Avenues

This study provides a beneficial perspective on DT and its relationship with WA and RC. Further, it is essential to acknowledge the limitations associated with it. These limitations suggest avenues for future research to advance studies in this domain further. ‘

First, “digital agility,” as conceptualized in Salmela et al.’s (2022) recent work, is a more prominent construct than using WA and DT as separate constructs. It can be inferred as an amalgamation of both the constructs- WA and DT. Digital agility is defined differently in different contexts, depending on the unit of emphasis, such as individual, organizational, societal or industry level (Salmela et al., 2022). It has multiple drivers and certain challenges in the adoption process (Duvivier & Gupta, 2023). The authors could not consider digital agility as the study variable due to the need for a scale to measure “digital agility.” Therefore, future research can develop a scale to measure digital agility to facilitate researchers in pursuing empirical studies on WA and DT at a time instead of two different constructs. In the future, how organizations can be motivated to adopt digital agility to facilitate DT in the workplace can be investigated.

Second, the current theoretical model limits the study variables to three to maintain parsimony. However, future research avenues can check for the moderating role of “digital strategy” in the connection between being agile and DT because for a successful DT, establishing a strategic alignment and governance is essential (Fischer et al., 2020). Further, personality traits of individuals, such as “emotion,” are vital for successfully implementing DT in organizations (Kupiek, 2021); personality also impacts the agility of the workforce (Maran et al., 2022). Hence, future studies can assess the interplay of personality, such as emotion, in the relationship between WA and DT. “Digital HR practices” can be studied as an organizational-level mediator variable for examining DT as it has been marked to influence the booming DT (Nicolás-Agustín et al., 2022).

Third, in this study the authors used age, gender, and education qualification as control variables. They attained a negative relationship between educational qualification level and DT. To explore this negative relationship specifically, future studies can consider educational qualification as the moderator variable that impacts the relationship between WA and DT.

Fourth, all the variables in this study, WA, RC, and DT, were perception-based. The self-reported measures help in examining the perception of an individual adequately. The authors utilized a time-lagged research design to make the model more comprehensive and explore the consistency in the employees' perception over the cross-section of times. They also conducted examinations using analyses to control common method bias (Williams & McGonagle, 2016). Further, postanalysis results suggested no concern for the common method bias. The dependent variable (i.e., DT) can be well assessed by anatomizing the perceptions of the supervisors, managers, and employees. To maintain the parsimony of the model, the current study does not incorporate multisource data. Moreover, future studies may consider multisource or multilevel data-based studies (Wilson & Baumann, 2015) to validate the mentioned findings.

Fifth, this study took place in India, wherein the context of the sample under scrutiny differs. Hofstede (1984) suggested that the uncertainty avoidance culture differs for different nations. Culture may influence the level of adoption of DT (AlNuaimi et al., 2022) based on the country one belongs to. Therefore, conducting research in a nation with low uncertainty avoidance, India, might influence the study's overall finding. Thus, generalizability can be a concern. Future studies can replicate this study in different cultural contexts (under-developed or developed nations) to understand agile workers' adoption of DT.

Finally, the authors could not establish causal relationships, although they had gathered data on WA and RC at two different cross sections of time. RC likely encourages WA (i.e., the relationship in the reverse direction of the current model). Employees ready to adapt to change can have higher levels of agility due to their proactivity. Therefore, an experimental study or a longitudinal research design is warranted to understand the causal relationship among the variables (Wilson & Baumann, 2015).

CONCLUSION

In the contemporary landscape of business, the ability to embrace change is no longer optional but imperative. DT is a cornerstone for maintaining competitiveness in the age of Industry 4.0. It has become abundantly clear that an organization's digital future is intricately linked to the digital readiness of its workforce. WA is a prerequisite for navigating the waves of change and adapting to unforeseen challenges, especially in the ever-evolving digital landscape. However, WA alone is insufficient to decide the extent of DT within an organization.

The synergy of agile employees and organizations is critical to effectively navigating DT. This synergy empowers individuals and organizations to identify and address the challenges that DT presents proactively. Through this joint effort, an organization can gain a sustained competitive advantage by harnessing advanced technologies, thereby embracing the full potential of DT. As businesses grapple with the demands of a rapidly changing digital world, one thing remains clear: WA and DT are inextricably linked, promising a more competitive and innovative future.

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CONFLICTS OF INTEREST

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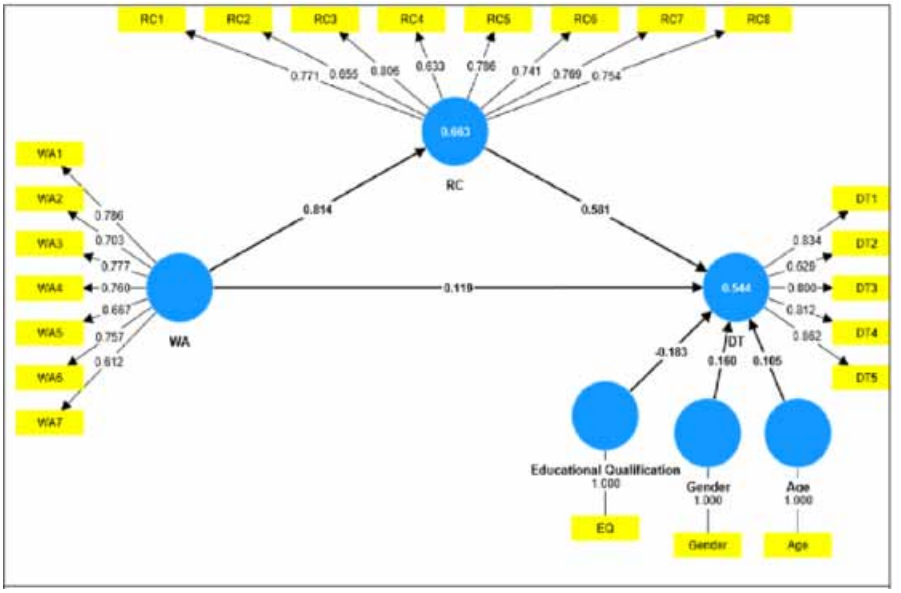
APPENDIX

Figure 2. PLS Model With R2 and β Coefficients From SmartPLS4 (Note. Age, gender, and educational qualification level are the control variables)



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