

Optimizing organizational agility through digital transformation : The mediating role of employee attitude towards change

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Abstract

In today's volatile, unpredictable, complex and ambiguous (VUCA) climate, it is vital for organizations to remain agile to compete against rivals by undergoing digital transformation and altering employee attitudes. This research report aims to understand the interaction among these three elements of our investigation. A meticulously constructed questionnaire was developed and distributed to employees across many sectors: Manufacturing, IT, Banking and Education. A total of 212 valid replies were gathered and analysed. The study demonstrated that DT exhibits a substantial negative correlation with attitude, evidenced by a path coefficient of $\beta = -0.521$ ($p = 0.002$), hence affirming hypothesis H1. Likewise, Attitude demonstrated a statistically significant positive correlation with OG at $\beta = 0.431$ ($p = 0.012$), hence validating hypothesis H2. Digital transformation exerts a negligible adverse direct impact on organizational agility, with a path coefficient of $\beta = -0.321$ ($p = 0.112$). This indicated that as digital transformation escalates, organizational adaptability often diminishes. This may be attributable to employee insecurity or disengagement. Consequently, Hypothesis H3

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is rejected. The mediation study indicated full mediation impact of employee attitude on the link between digital transformation and organizational agility, hence confirming H4.

The present study opened new possibilities for future researchers to use multi-group analysis (MGA) to compare industries. To further understand the transformation-agility link, researchers can incorporate leadership support and employee digital competency. The study discovered that DT does not impact OG unless staff attitudes are aligned. As a result, management and organizational leaders must prioritize training programs to strengthen skill sets before implementing any changes in the company. Although this study provided significant insights, it had numerous drawbacks. First, cross-sectional studies restrict causality inference. Second, the sample was limited to a sector or region, affecting generalizability.

Subject Classification: 90B50.

Keywords: Digital transformation, Organizational agility, Attitude, Change.

Introduction

In the dynamic landscape of business environment where all business organisation have to face volatile, uncertain, complex and ambiguous (VUCA) business environment for sustainability and success. Hence, it is the ability of organisation and its leaders to adapt and respond swiftly to such changes known as organizational agility. This adoption is critical for organisations growth and success. The key drivers that is helping organisation to adapt rapidly evolving business landscape is the focus of organisation on digital transformation (Vial [19]) & integration of digital technologies into all aspects of business delivering value to customers (Ononiwu [23], Zhang, Chen, and Wang [24]). As the digital transformation is needed in the business environment, business organisations are forced to adapt and innovate, making organisation more agile which is a key determinant to create competitive edge in business (Shao [25]).

The digital transformation in technology forces organization to integrate emerging technologies like -artificial intelligence, big data, internet of things, blockchain technology, augmented & virtual reality. Although, the technological aspects is highly emphasised aspects of digital transformation there is still a need to understand another human element particularly the employees attitude towards change in driving effectiveness of such transformation efforts (McKinsey [26]). In the course of digital transformation, organization not only faces hurdles from legal systems and skill gaps but also requires strategic alignment of transformation with key leaders roles and organization support for adopting change. The success of digital transformation initiatives largely depends on human

factors. Employee attitude towards change plays a pivotal role in determining whether transformation efforts succeed or fail (Sharma and Gupta [35]).

Employee attitudes towards change can either accelerate or hinder the adoption of digital initiatives (Saleem and Athambawa [12]). Resistance, uncertainty, and cognitive rigidity among employees may create significant barriers to agility (Zona, Sarianti, and Andriani [22]), whereas openness, trust, and positive emotional responses can enhance the organisation's ability to adapt rapidly (Utami and Triady [17]). Despite growing recognition of the importance of employee factors, the critical mediating role of employee attitudes in the relationship between digital transformation and organizational agility has received relatively limited empirical attention.

The present study is being undertaken to fill this gap by exploring how employee attitudes towards change mediate the relationship between digital transformation and organizational agility in Indian organizations particularly in banking, manufacturing and IT sector. Hence, the research seeks to offer a comprehensive understanding of the human dynamics underlying successful digital transformation initiatives.

2. Literature Review

In this section, literature review is being done to comprehend the role of digital transformation in understanding organization agility and its effect on employee attitude towards change.

2.1 Digital Transformation and Organizational Agility

Digital transformation is not only about integration of digital technologies but also to redesign organizational process, to deliver value to customers by leveraging digital innovations (Vial [19], Westerman, Bonnet, and McAfee [27]). Technology, once learnt and mastered, paves way for performing things in new ways and the change is lasting. This tech-driven revolution is forcing companies to change their operating paradigm, from manpower-intensive to adopting technology-centric (Malisetty and Sowmya [33]).

On the other hand, Organizational agility is defined as an organisation's ability to rapidly sense changes in its environment and respond efficiently and effectively (Tallon et al. [28]). Agile organizations can quickly adapt to market shifts, technological disruptions, and customer

demands, maintaining competitive advantage in a dynamic business environment (Doz and Kosonen [2]). Prior research suggests that organizations leveraging digital tools and data-driven systems can significantly enhance their responsiveness and adaptability [4]. Thus, digital transformation acts as a key enabler of agility [34]. A study by Archer, Wang, and Kang [31] found that digital information helps in decision making process by providing real time information (Chen, Preston, and Swink [1]), reducing lead time (Sebastian, Ross, and Beath [14]), encouraging culture of innovation, learning a hall mark of agile organisations (Kane et al. [6]) better decision-making capabilities and collaborations (Yoo et al. [21]). Agile firms continually sense opportunities for competitive action in their product-market spaces and marshal the necessary knowledge and assets for seizing those opportunities [13].

Despite several advantages, it brings several challenges in its implementation in the organisation such as legacy systems, lack of digital skills, in adequate leadership support, and employee resistance to change (Fitzgerald et al. [29]), inhibit the agility outcome of a digital initiative. Study by Bharadwaj et al. [30] found that to incorporate digital transformation and change, organization should have coherent digital strategy aligned with the goals of organization for digital transformation, else it effects the agility.

A study by Chen, Preston, and Swink [1] in supply chain operations investigated the role of digital transformation on organizational agility and discovered that by leveraging technologies like big data organizations improve responsiveness and control market disruption. Another study by Sebastian, Ross, and Beath [14] in a diverse set of sectors like healthcare, consumer, engineering, and construction found that the organization who integrate digital platforms, particularly cloud based tools are more rapid in reacting to market dynamics with speed and flexibility. Further Yoo et al. [21] found that the adoption of digital platforms makes organizations to rapidly prototype, experiment with, and deploy new service offerings. This capacity to reconfigure value-creation activities on the fly significantly enhances an organisation's responsiveness and adaptive agility

On the contrary, study by Bharadwaj et al. [30] found that when organisations do not adapt changes due to VUCA environment, then the organization results in fragmented, siloed projects with poor cross functional coordination. A similar finding was noted by Jonathan, Watat, and Nobre [4] who found that when digital platforms are poorly managed then they bring coordination breakdown, ultimately impeding organisation respond to change. Similarly, Vial [19] in their study discovered that the lack of digital transformation initiatives can hamper coordinating and slow down decision making by reducing firm's agility.

H₁: Digital Transformation does influence organization's agility.

2.2 Digital Transformation and Attitude of Employees

Organizations must provide a supportive atmosphere that promotes participation and adaptation in order to impact employee attitudes and survive in a competitive climate (Princes et al. [10]). Employee attitude, on the other hand, refers to the beliefs, emotions, and behavioral patterns that workers have in their role inside the company (Robbins and Judge [11]). While those with a negative attitude express discontent and reluctance to change, employees with a good attitude rapidly adjust to organizational changes and stay dedicated to their work (Luthans [8]).

According to a study by Fahmi, Tjakraatmadja, and Ginting [3], employee attitudes toward change are greatly influenced by digital literacy and culture. Another study by Nadeem, Za, and Venditti [9], discovered that employee attitudes on acceptance of digital transformation are adversely affected by fear, worry, and perplexity. As a result, they emphasized the need for training in balancing psychological and attitudinal anxiety. Employees are an important resource in digital transformation (DT), and their attitude is crucial to the success of the company, according to the resource-based view (RBV) (Sethi, Kumar, and Kumar [15]). Employee acceptance of digital transformation has the potential to improve employee engagement and performance (Widodo et al. [20]), which is correlated with a number of factors such as employee leadership, culture, training, motivation, competency, and ability; otherwise, it has a negative impact on employee attitude and performance.

H₂: Digital transformation does influence employee attitude

2.3 *Employee Attitude and Organizational Agility*

Employee engagement is one of the integral parts of an organisation; it highly depends on many facets, for example, employee attitude, job satisfaction, scope for career development and workplace culture (Jayalakshmi et al. [32]).

Employee attitude plays a pivotal role in shaping organizational agility, serving as both a catalyst and a constraint depending on its nature and direction. Organizational agility—the ability to rapidly adapt to market changes, respond flexibly to customer demands, and innovate continuously—relies heavily on the mindset, motivation, and adaptability of its workforce (Doz and Kosonen [2]). Positive employee attitudes, such as openness to change, proactive behavior, and commitment to organizational goals, have been shown to foster agility by enabling smoother transitions during transformation processes and enhancing collaborative efforts across departments (Sherehiy and Karwowski [16]). For instance, employees with a learning-oriented attitude are more likely to embrace new technologies and adapt to evolving job roles, which is essential for agile practices (Voorde and Beijer [18]).

Conversely, negative attitudes—such as resistance to change, lack of engagement, or job dissatisfaction—can hinder agility by creating psychological barriers to innovation and slowing decision-making processes (Judge et al. [5]). A workforce that is unwilling to depart from established routines may resist agile initiatives, thereby impeding the organization's ability to stay competitive. Therefore, while employee attitudes can significantly enhance organizational agility when aligned with strategic objectives, they can also obstruct it if driven by fear, uncertainty, or entrenched habits. This dual influence underlines the importance of cultivating a positive organizational culture and investing in change management strategies that align employee values with agile goals (Lu and Ramamurthy [7]).

H₃: Employee attitude does influence organizational agility.

Since few studies have explicitly examined this topic, it is necessary to conduct an empirical investigation into the link among digital transformation, organizational agility, and employee attitude, including the mediating role of attitude. Thus, in order to verify the following hypothesis, a conceptual framework is being developed (Figure 1).

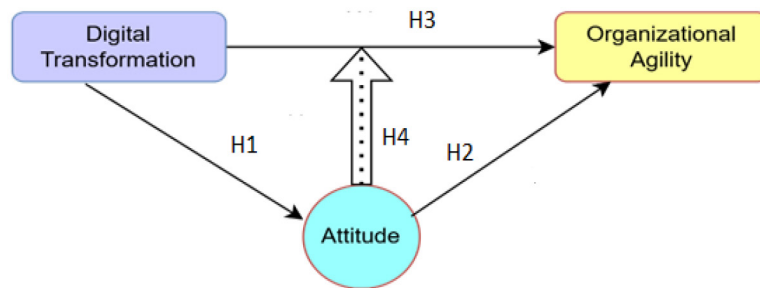


Figure 1
Conceptual Framework

Source: Author's compilation

3. Research Methodology

The study used a survey technique approach to gather data from respondents in Delhi-NCR from a variety of industries, including banking, manufacturing, and information technology, in order to achieve its goals. Stratified and snowball sampling techniques were utilized in the study. Snowball mapping has aided in gathering data through referrals, and stratified has assisted in separating businesses. Additionally, a well-structured questionnaire with a Likert scale from 1 to 5 was created utilizing a literature research in order to gather data. A total of 212 valid replies, or 70.6% of the 300 questionnaires that were issued, were gathered. The study used a variety of tools to evaluate the data. SPSS-30 was used to determine the demographic profile of the respondents, as well as employee perspectives on digital transformation. Further reliability analysis was performed on each construct, and the confirmatory factor analysis (CFA) was utilized to test the construct using PLS_SEM formative model analysis. Lastly, the mediating effect of attitude between digital transformation and organizational agility was evaluated using PLS-SEM.

4. Data Analysis & Interpretation

4.1 Demographic Profile analysis:

The demographic profile and contextual overview give important information about the respondents' characteristics and organizational preparedness for digital transformation (DT). According to the demographic analysis shown in Table 1, a significant portion of respondents (32.55%) are between the ages of 31-40 years, followed

Table 1
Demographic Profile & Organizational Context Overview on DT

Demographic Profile & Organizational Context Overview on DT							
		Freq	% age			F	% age
Age	<30 Years	38	17.92	DT Initiatives	Very Low	34	16.04
	31-40 Years	69	32.55		Low	36	16.98
	41-50 Years	62	29.25		Moderate	45	21.23
	51-60 Years	43	20.28		High	53	25.00
Gender	Male	131	61.79		Very High	44	20.75
	Female	81	38.21		Not Prepared at all	32	15.09
Educational Qualification	Diploma	46	21.7	Organizational Preparedness on DT	Slightly Prepared	43	20.28
	UG	53	25		Moderately Prepared	45	21.23
	PG	65	30.66		Well Prepared	41	19.34
	Professional	48	22.64		Fully Prepared	51	24.06
Current Position	Sr. Level Mgmt	40	18.87	Frequency of introducing Digital Tools	Rarely	27	12.74
	Middle L. Mgmt	72	33.96		Occasionally	34	16.04
	Jr. L. Mgmt	66	31.13		Sometimes	49	23.11
	Others	34	16.04		Often	56	26.42
Sector of Employment	IT	65	30.66		Very Frequently	46	21.70
	Manufacturing	45	21.23				
	Banking	53	25				
	Education	35	16.51				
	Others	14	6.604				

Source: Authors Analysis

closely by those between the ages of 41-50 years (29.25%), indicating a workforce largely composed of mid-career professionals with both experience and adaptability to DT.

Males made up the majority (61.79%) of the sample, with the remaining (38.21%) females, indicating a potential gender imbalance in leadership or technology-related work. In terms of educational credentials, a sizable number have postgraduate (30.66%) and professional degrees (22.64%), indicating a well-qualified respondent base capable of using digital technology. The majority of responders were in middle (33.96%) and junior (31.13%) management positions, demonstrating that mid- and early-career personnel are critical to digital projects.

The IT industry (30.66%) has the most presence, demonstrating its dominance in DT participation, followed by banking (25%), and manufacturing (21.23%). Organizational context data show that, while many firms are at various phases of DT, there appears to be unequal acceptance and readiness.

According to the findings, the majority of respondents are mid-career professionals, primarily men, who are highly qualified and hold middle and junior management positions. IT, finance, and industrial sectors are more actively involved in digital transformation (DT) activities. While 45.75% of firms indicate high to very high DT initiatives, a substantial 33.02% continue to report poor levels. Organizational preparation is mixed: 43.4% of businesses are well or fully prepared, while 35.37% are unprepared or very marginally prepared. The frequency of introducing digital tools varies, with the majority saying "often" (26.42%) or "sometimes" (23.11%), although 28.78% still use them infrequently or occasionally. This implies that digital readiness varies and emphasizes the need for more standardized DT initiatives across enterprises.

4.2 Demonstrating the Formation of Constructs Using the PLS-SEM Formative Model

A formative model approach based on PLS-SEM was used to assess the making of each component in the research. The formative model, which uses PLS-SEM, assists in determining the outer weights for the constructs of digital transformation, organizational agility and attitude of employee towards change. The outer weights are regression coefficients that represent each indicator's contribution to the creation of the construct. According to Jayalakshmi et al. [32], for each item to contribute to the construct, the outer weight must surpass 0.5, indicating a strong

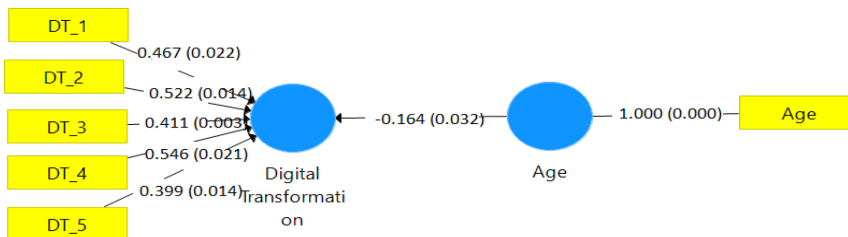


Figure 2

Confirmation of Construct-Digital Transformation using Formative Model

Source: Authors Analysis

contribution, while a range of 0.2 to 0.5 indicates a moderate contribution, assuming the p-value is significant.

The formative measurement model using PLS-SEM shown in Figure 2-4 was employed to validate the construct of digital transformation based on five formative indicators (DT_1 to DT_5). The outer weights of these indicators ranged from 0.399 to 0.546, all statistically significant at $p < 0.05$, indicating that each indicator meaningfully contributed to the formation of the digital transformation construct. The path coefficient from age to DT was found to be -0.164, $p=0.032$, indicating that as the age of the respondents increases, their involvement with new changes in the digital side in the organization may tend to decrease, highlighting generational gap in the adoption of new technology.

A similar approach was used to assess the formation of attitude and organizational agility using the same formative measurement model. Both the constructs were finally proven with outer weights ranging from 0.412-

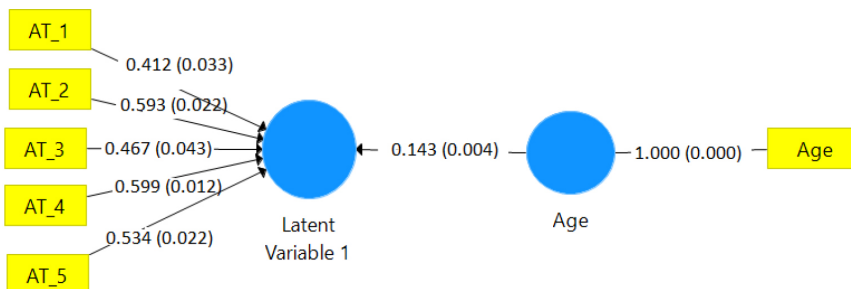


Figure 3

Confirmation of Construct-Attitude & using Formative Model

Source: Authors Analysis

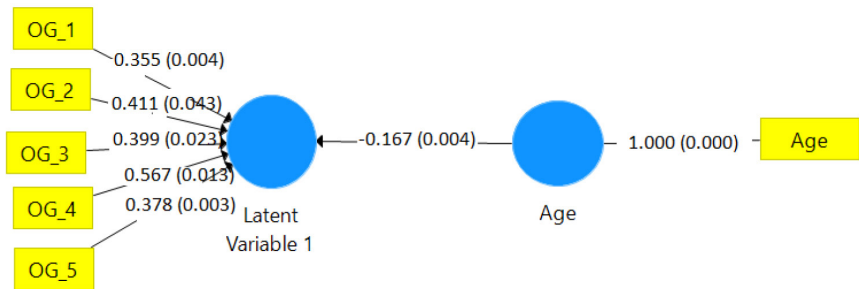


Figure 4

Confirmation of Construct- Organizational Agility using Formative Model

0.599 for Attitude with path coefficient $\beta=0.143$ $p=0.004$, reflecting that older individual may possess more favourable or resilient attitude towards organizational changes, despite being less engaged in digital transformational activities.

Furthermore, organizational agility was also assessed and the result indicated that all the items formed the construct with outer weight ranging from 0.355-0.613 and the age path coefficient was found to be -0.167, $p = 0.004$, indicating that as the age processes, the tendency for the employee to remain adaptive tends to decrease.

4.3 Meditation effect and hypothesis testing

The present study explored the mediating role of Attitude between digital transformation (DT) and the dependent construct, Organizational Agility (OG) (Figure 5).

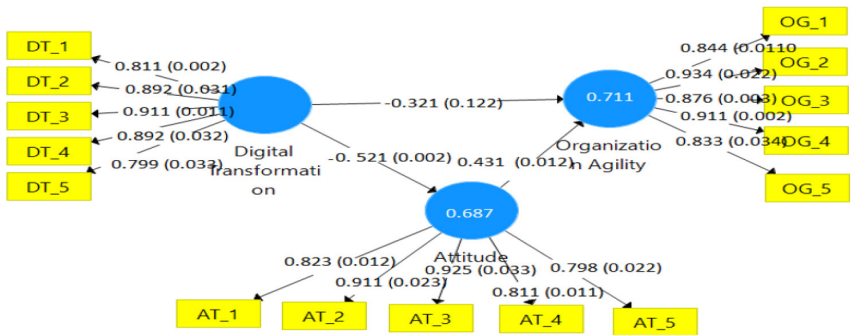


Figure 5

Mediation Effect and Hypothesis testing using Constructive Model

Source: Authors Analysis

The analysis found that Digital Transformation has a significant direct effect on employee attitude, with a path coefficient $\beta = -0.521$ ($p = 0.002$), indicating a moderately strong negative relationship.

This could be because, employees might tend to get stressed, fear due to technological changes. This means that as digital transformation efforts increase, employee attitude tends to decrease. The model explains 68.7% ($R^2 = 0.687$) of the variance in attitude. Since the effect is statistically significant, Hypothesis H_1 is supported.

Further, the direct effect of attitude has a positive significant effect on organization agility with a path coefficient $\beta = 0.431$ ($p = 0.012$), indicating a moderately strong positive relationship. This means that as the employee attitude is positive, then organization tends to be highly agile. The model together with digital transformation explains 71.1% ($R^2 = 0.711$) of the variance in organization agility. Since the effect is statistically significant, H_2 is supported.

Also, digital transformation has a negative insignificant direct effect on organizational agility with path coefficient $\beta = -0.321$ ($p = 0.112$). This means that when digital transformation increases, organizational agility tends to decrease. This could be due to insecure, or disengagement being realised by the employees. This suggested that while the direction of the relationship is negative, it is not strong enough to be considered significant at the 0.05 level. Therefore, Hypothesis H_3 is rejected.

Table 2
Mediation Result

Mediation Analysis	Path	β	P-Val	Results
Mediation analysis b/w DT, Attitude and Organization Agility	DT----->Attitude	-0.521	0.002	Significant negative effect
	Attitude---->OG	0.431	0.012	Significant positive effect
	Dt----->OG(DE)	-0.321	0.012	Not significant
	DT-->Att--->OG (IDE)	-0.224	0.034	Significant
	Total Effect	-0.545	0.013	Significant

Source: Authors Analysis

The mediation analysis revealed a full mediation effect of employee attitude in the relationship between digital transformation and organizational agility. While digital transformation negatively impacted employee attitude ($\beta = -0.521$, $p = 0.002$), attitude had a positive and significant effect on organizational agility ($\beta = 0.431$, $p = 0.012$) Table 2. The direct path from digital transformation to organizational agility was not statistically significant ($\beta = -0.321$, $p = 0.112$), whereas the indirect effect via attitude was significant ($\beta = -0.224$, $p = 0.034$). The total effect remained significant ($\beta = -0.545$, $p = 0.013$). These results confirm that attitude fully mediates the relationship between digital transformation and organizational agility accepting H4, suggesting that the negative impact of digital transformation on agility operates primarily through its effect on employee attitudes. But, digital transformation has a negative insignificant direct effect on organization agility with path coefficient $\beta = -0.321$ ($p = 0.112$). This means that when digital transformation increases, organizational agility tends to decrease. As being insignificant, hypothesis H3 is rejected.

5. Conclusion

The current study aimed to determine the link between Digital transformation (DT), Attitude (AT) and Organizational Agility (OG), & also to evaluate the mediating function of attitude between DT & AT. A well-organized survey was created and sent to staff members connected to several sectors—Manufacturing, IT, Banking and Education. There were 212 genuine replies gathered and examined. The study found that DT has a negative significant association with attitude with a path coefficient of $\beta = -0.521$ ($p = 0.002$), suggesting a fairly strong negative link, supporting the hypothesis H1. Likewise, Attitude had demonstrated a positive significant correlation with OG at $\beta = 0.431$ ($p = 0.012$), supporting the hypothesis H2. With path coefficient $\beta = -0.321$ ($p = 0.112$), digital transformation directly negatively affects organizational agility. This indicates that organizational agility usually declines with rising digital transformation. Insecurity or staff disengagement might be causing this. This suggested that although the course of the association is negative, it is not strong enough to be deemed important at the 0.05 level. So, Hypothesis H3 is rejected. Moreover, the mediation study indicated that in the link between digital transformation and organizational agility, employee attitude completely mediates; hence, H4 is approved.

Scope for future research

The current study revealed the range for future researchers as future academics could want to do variance analysis on multi-group analysis (MGA) to investigate industry variations. Research can also seek to include a few other mediators including leadership support and staff digital competency to understand more profound insights into the transformation-agility link.

Managerial Implication.

The research showed that until employee attitude is in line, DT by itself does not affect OA. Therefore, Management and Organization head should give training program top priority to enhance skill set before including any organizational modification. Furthermore, leaders and senior management have to adopt a digital positive culture to guarantee that staff members behave as acceptor of change rather than opposing it. The results advocated a people-centric digital transformation plan in which technology improvements accompany worker empowerment and involvement.

Limitations

Although the research provides insightful analysis, several shortcomings have to be noted. First, the cross-sectional design restricts the capacity to deduce causality. Second, the sample was limited to a certain sector or area, which might influence generalizability. Third, answer bias might affect self-reported statistics. The study, finally, concentrated on a small number of constructs; other important factors might have been left out. Longitudinal or experimental approaches as well as more general contextual sampling will help future research to overcome these constraints.

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