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Impact factors on digital transmission in enterprises: an empirical study from an emerging economy

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Abstract

This study investigates the impact of management commitment, Information Technology (IT), employee digital skills, competitive intensity, and strategic orientation on the digital transformation of Vietnamese enterprises. Rapid technological advancements and the need for digital integration in global markets make this exploration timely and valuable. Using a mixed-methods approach, the research combines quantitative data from a survey of 237 Vietnamese enterprises with qualitative insights from in-depth interviews with industry leaders. The findings demonstrate that management commitment and strategic IT deployment are crucial for initiating and sustaining digital transformation. Employee digital proficiency enhances an organization's capacity for innovation and adaptation. Competitive intensity drives enterprises to accelerate digital transformation to maintain or improve market position. Strategic orientation significantly shapes digital transformation trajectories, ensuring alignment with broader business goals. This study highlights the complex interplay of these factors and their collective impact, emphasizing the need for cohesive strategies that integrate strong leadership, skilled human capital, and a forward-looking approach to succeed in the digital era.

Keywords: Digital transformation, management commitment, role of Information Technology (IT), digital knowledge, competitive intensity, strategic orientation

1 Introduction

Digital transformation is a multifaceted process impacting various organizational aspects and is influenced by numerous factors. Research indicates digital transformation enhances organizational agility and resource allocation flexibility (Priyono et al., 2020). The success of digital transformation hinges on the roles of IT and management commitment, sectorial relevance, and key drivers (Kő et al., 2021). Four generic digital transformation strategies differ in leadership style, skill importance, risks, challenges, and potential failure consequences (Brunetti et al., 2020). Digital transformation also positively impacts international trade, geopolitics, supply chain efficiency, and access to digital services (Font-Cot et al., 2023).

Human resource management digital transformation is driven by internal customer needs, industry innovation, competitor challenges, digital governance, and digital era demands (Zhang & Chen, 2023). Top management and policy support are crucial for digital transformation in construction enterprises (Zhang et al., 2023). Proactive management and rapid implementation are vital for successful digital transformation in

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organizations (Laorach & Tuamsuk, 2022). The impact on small and medium enterprises (SMEs) underscores the need to systematically evaluate digital transformation effectiveness (Medennikov, 2020).

Success in digital transformation is also influenced by individual digital knowledge and skills, the chosen transformation model, and critical success factors (Sumangala & Kini, 2022; Mićić & Mastilo, 2022). Organizations must address resource constraints and talent management (Kutnjak, 2021; Li, 2023). Digital transformation is essential for developing a digital economy at both national and global levels (Petrova et al., 2021). In Vietnam, critical areas of digital transformation include the growth of digital enterprises and the digitalization of traditional businesses. This involves integrating digital technologies into products, transforming business models, and modifying production processes through digital data, automation, and virtualization (Hang et al., 2021). Provincial administrative reforms in Vietnam can achieve higher efficiency by adopting digital transformation strategies, suggesting that digital transformation and administrative reforms should be pursued concurrently for optimal results (Thanh, 2021).

The paper is structured as follows: Section 2 provides a comprehensive literature review and develops hypotheses. Section 3 details the research methodology employed. Section 4 presents the study's main findings. Section 5 discusses the results. Finally, Section 6 delivers the concluding remarks.

2 Literature review

2.1. Digital transformation and its practical research

Digital transformation integrates digital technology into various aspects of business and society, leading to significant changes in operations and strategies (Mokhtar et al., 2020). It encompasses the systemic restructuring of economies, institutions, and society (Rachinger et al., 2019). This transformation impacts business models, intrapreneurship, work design, leadership, and consumer experiences (Cheng et al., 2023; Schwarzmüller et al., 2018). Successful digital transformation requires alignment between digital initiatives, IT, and organizational strategies (Matt et al., 2015). Integrating digital technologies is crucial for achieving transformation, and a well-defined strategy can guide this process (Zhang et al., 2023).

Digital transformation presents both opportunities and challenges. It necessitates transitioning business processes from manual to automated, which can be beneficial and problematic (Faraboschi et al., 2023). Assessing an enterprise's readiness for digital transformation involves evaluating organizational drivers and barriers. Leadership, work environment, IT alignment, and company performance are significant factors influencing the success of digital transformation initiatives (Alasiri & AlKubaisy, 2022). Overall, digital transformation is a multifaceted process requiring careful planning, strategic alignment, and an understanding of its broad implications. While it has the potential to revolutionize business models, enhance consumer experiences, and drive innovation, it also presents challenges that organizations must address effectively.

2.2. Role of IT and Digital Transformation

The role of IT in digital transformation is multifaceted in any enterprise. It influences various organizational functioning, innovation, and adaptation to the digital era. Digital transformation is not merely a technological shift but a comprehensive organizational change that necessitates strategic alignment and agility to thrive in the digital age. The role of IT in digital transformation is pivotal, significantly impacting organizational structure, routines, information flow, and the capacity to adapt to IT (Li et al., 2017). Digital transformation is an ongoing process utilizing new digital technologies, with agility as the core mechanism for strategic renewal, influencing business models, collaborative approaches, and organizational culture (Warner & Wäger, 2019). The impact of IT infrastructure on digital transformation is indirect, mediated by the digital transformation strategy (Zhang et al., 2023). Digital transformation mediates the relationship between relational embeddedness, cognitive embeddedness, and enterprise performance, highlighting its intricate relationship with organizational dynamics (Li & Fei, 2023).

Digital transformation reshapes information management, underscoring the critical role of information in organizational operations (Mokhtar et al., 2020). It also profoundly affects enterprise innovation, promoting corporate innovation and absorptive capacity, with the latter mediating the relationship between digital

transformation and corporate innovation (Wang, 2022). Digital transformation involves digitalization initiatives that enhance business processes and deliver customer value, underscoring its significance in the contemporary knowledge economy (Marks & AL-Ali, 2022). Based on these arguments, the ensuing assumptions will undergo testing:

H1: The role of IT positively impacts digital transformation.

2.3. Management commitment and Digital transformation

The role of management commitment in digital transformation is critical to the success of organizational initiatives. Management commitment significantly moderates the relationship between IT infrastructure and digital transformation strategy and between digital transformation strategy and performance (Zhang et al., 2023). This highlights the importance of top management's active involvement and support in driving digital transformation efforts. Organizational commitment factors significantly influence business performance in the context of digital transformation, emphasizing the pivotal role of commitment in achieving successful outcomes (Phuong et al., 2023; Benkhider et al., 2021). The influence of digital leadership on innovation management, grounded in dynamic capability, underscores the role of leadership in fostering innovation within the digital transformation context (Mihardjo et al., 2019).

Furthermore, digital transformation impacts lean production systems and self-thinking supply chains, demonstrating the broader organizational implications of digital transformation. Management commitment is essential for successfully integrating and adapting digital technologies within production and supply chain processes (Schumacher et al., 2020; Calatayud et al., 2019). A study on small and medium-sized ports in the TEN-T network emphasizes the need for improved managerial capacity in environmental responsibility and digital efficiency, highlighting the critical role of management commitment in driving sustainable and digital port service ecosystems (Gerlitz & Meyer, 2021).

In conclusion, management commitment is a crucial driver of successful digital transformation initiatives, influencing various aspects such as IT infrastructure, innovation management, lean production systems, and sustainable supply chain management. Top management's active involvement and commitment are essential for navigating the complexities of digital transformation and achieving positive outcomes. So it is proposed the following hypothesis:

H2: The management commitment positively impacts digital transformation.

2.4. Competitive intensity and Digital transformation

The impact of competitive intensity on digital transformation is multifaceted and significantly influences organizational performance and strategic positioning. The literature provides valuable insights into the relationship between competitive intensity and digital transformation, elucidating its business implications. Competitive intensity plays a crucial role in shaping the perceived benefits of digital transformation. Research indicates that competitive pressure in industries positively and significantly affects the perceived benefits of digital transformation, particularly in the textile industry (Tsai & Su, 2022). This underscores the dynamic interplay between competitive forces and the perceived advantages of digital transformation initiatives, highlighting the need for organizations to adapt to competitive pressures through digital innovation.

The impact of digital transformation on the competitiveness of small and medium enterprises (SMEs) in the agro-industrial sector further underscores its significance in enhancing enterprise competitiveness, particularly in highly competitive environments (Medennikov, 2020). This emphasizes the strategic imperative for SMEs to leverage digital transformation to improve their competitive positioning and sustainability amid intense market competition. Moreover, the influence of digital transformation on financial risk in competitive industries has been examined, revealing that digital transformation significantly mitigates financial risk in highly competitive environments (You & Zhao, 2023). This underscores digital transformation's role in enhancing organizational resilience and stability amidst intense market dynamics.

Additionally, the impact of digital transformation on sustainable supply chain management and organizational sustainability has been explored, emphasizing its role in developing sustainable strategies and improving competitive positioning (Stroumpoulis & Kopanaki, 2022; Hilali et al., 2020). This highlights the transformative potential of digital technologies in fostering sustainability and competitive advantage within organizations.

The hypothesis is built by:

H3: The competitive intensity positively impacts digital transformation.

2.5. Digital Knowledge and skills of employees and Digital transformation

Employees' digital knowledge and skills are pivotal to the successful digital transformation of organizations. Research highlights the multifaceted impact of employee competencies on digital transformation, underscoring their significance in navigating digitalization complexities and fostering organizational readiness for the digital era. The literature emphasizes that digital transformation requires organizations to recognize the importance of agility and developing dynamic capabilities. In this context, employee knowledge and skills enable organizations to adapt to new digital technologies, reshape business models, and foster a collaborative culture, driving strategic renewal (Warner & Wäger, 2019). Employee acquisition of digital knowledge and skills is essential for successfully implementing digital transformation strategies. While digital business strategies often outline future business opportunities based on digital technologies, achieving these future states necessitates developing and applying digital competencies among employees (Matt et al., 2015).

The role of employee intentions in learning and adopting digital technology has been examined, highlighting the significance of employee skill and knowledge capabilities in embracing digital technology. Findings underscore the importance of understanding employee intentions, challenges, and pathways in adopting digital technology, emphasizing the pivotal role of employee competencies in driving digital transformation initiatives (Chaudhuri et al., 2023). Additionally, the impact of digital transformation on employee competencies during the COVID-19 pandemic has been explored, emphasizing the need for employees to acquire new knowledge and skills to utilize digital technologies effectively. This underscores the imperative for organizations to invest in developing the digital competencies of their workforce to navigate the challenges posed by digital transformation (Bikse et al., 2021). So, the proposed hypothesis is:

H4: The digital knowledge and skills of employees positively impact digital transformation.

2.6. Strategic orientation and Digital transformation

Strategic orientation significantly impacts digital transformation, influencing organizational performance, innovation, and competitive advantage. An organization's strategic orientation shapes its approach to digital transformation, driving the development of dynamic capabilities and fostering a culture of change and innovation (Warner & Wäger, 2019). This strategic renewal is an ongoing process that involves reshaping the organization's collaborative approach and culture to adapt to digital technologies and market dynamics. The literature highlights the positive effects of digital orientation and capability on digital innovation and organizational performance, emphasizing the role of strategic orientation in driving digital innovation and its subsequent impact on financial and non-financial performance (Khin & Ho, 2019). Strategic orientation represents a critical antecedent for new product development performance, enabling firms to create a competitive advantage and promote sustainable growth (X et al., 2021).

Research has explored the impact of strategic orientation on digital transformation capability and operational performance, revealing its positive influence on digital transformation capability and subsequent effects on operational performance (Jian et al., 2022). Additionally, studies underscore the importance of strategic orientation and its relationship with digital competence, highlighting its pivotal role in driving digital competence within organizations (Jian & Moon, 2021). The literature also examines the influence of strategic orientation on digital business strategy, highlighting its divergent and convergent effects under different industry dynamics, such as turbulence, concentration, and growth (Mithas et al., 2013). Strategic orientation is an antecedent of innovation characteristics, shaping the innovation firm markets and influencing new product performance.

In conclusion, the literature provides comprehensive insights into the multifaceted impact of strategic orientation on digital transformation, emphasizing its role in driving digital innovation, organizational performance, and sustainable growth. Strategic orientation shapes an organization's approach to digital transformation, driving capability development and fostering a culture of change and innovation.

Based on these empirical findings, the following core hypotheses have been formulated:

H5: The strategic orientation positively impacts digital transformation.

3 Methodology

The study tests the association between six independent variables and the dependent variable DIGI (Digital transformation) based on the following model:

$DIGI_i = \alpha + \beta_1 ROIT_i + \beta_2 MANA_i + \beta_3 COMP_i + \beta_4 KNOW_i + \beta_5 STRA_i + \varepsilon_i$,

Where

$DIGI_i$ stands for Digital transformation.

- α: constant term
- β: coefficient of variables
- ε_i: Residual

The independent variables included ROIT, MANA, COMP, KNOW, and STRA, which stand for the Role of IT, Management commitment, Competitive intensity, Digital knowledge and skills of employees, and Strategic orientation. They are hypothesized to have an associated impact on the Digital Transformation of Vietnamese enterprises.

Green's (1991) recommendation for calculating sample size (N) in multiple regression is $N \geq 50 + 8p$, where p represents the number of independent variables. The sample size for the present study, which involved six independent variables, was at least 98. 500 questionnaires were distributed to CEOs, CFOs, chief accountants, and managers of other operative departments in Vietnamese enterprises. Of these, 350 valid feedback questionnaires were received during the research process, resulting in a response rate of 70%. The questionnaire utilized a 5-point Likert scale with the following response options: (1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, and (5) Strongly agree. The model research, theoretical model, and hypothesis testing were examined using EFA methods in SPSS 24.0.

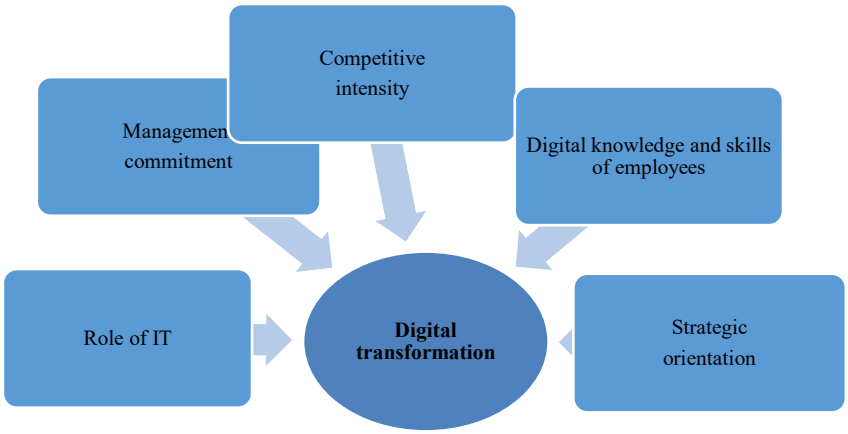

Figure 1: Overview of the theoretical framework

Based on the hypothesis, hereinafter is a summary of the descriptive scales.

Table 1: The variables description

Variables name	Coding of variables		Description
Role of IT	*Major variables*	*Minor variables*	
	ROIT	ROIT1	IT infrastructure readiness
		ROIT2	IT's role in strategic planning
		ROIT3	IT skills and capabilities
Management commitment	MANA	MANA1	Management vision and strategy support
		MANA2	Resource allocation and investment

		MANA3	Active leadership and involvement
		MANA4	Organizational culture and change support
Competitive intensity	COMP	COMP1	Market pressure
		COMP2	Speed of technology adoption
		COMP3	Investment in digital capabilities
Digital knowledge and skills of employees	KNOW	KNOW1	Technical proficiency
		KNOW2	Adaptability to new technologies
		KNOW3	Innovation and problem-solving
		KNOW4	Digital collaboration and communication
Strategic orientation	STRA	STRA1	Innovation orientation
		STRA2	Customer-centric orientation
		STRA3	Competitive orientation
Digital transformation	DIGI	DIGI1	Technological integration
		DIGI2	Organizational culture adaptation
		DIGI3	Employee skill development

According to the survey findings, the sample statistics are categorized into three primary groups based on education level:

Table 2: Sample statistics by education level

	Frequency	**Percentage %**
College degree	22	6,3%
University degree	298	85,1%
Postgraduate degree	30	8,6%
Total	350	100%

The sample statistics, categorized by position, are organized into three primary groups:

Table 3: Sample statistics by position

	Frequency	**Percentage %**
Senior Managers (CEOs/CFOs)	55	15,7%
Chief Accountants/Managers	159	45,4%
Operating Staffs	136	38,9%
Total	350	100%

The sample's statistics, categorized by work experience, fall into four principal groups:

Table 4: Sample statistics by work experience

	Frequency	**Percentage %**
Less than 3 years	139	39,7%
From 3 to 10 years	124	35,4%
From 10 to 20 years	52	14,9%
More than 20 years	35	10,0%
Total	350	100%

The three tables above illustrate the frequency distribution and percentages of various groups classified by qualifications, job titles, and work experience within the survey sample. The analysis incorporates 350 valid survey responses, ensuring a diverse and representative sample across multiple levels of qualifications, job roles, and professional experience within the organizations.

4 Results

Using SPSS 24.0 for testing EFA models, some research results were found below:
First of all, testing the reliability of all scales, including the Role of IT (ROIT), Management commitment (MANA), Competitive intensity (COMP), Digital knowledge and skills of employees (KNOW), Strategic orientation (STRA) and Digital transformation (DIGI). The results show that scale STRA has Cronbach's Alpha equal to 0.764, but STRA1 has a Corrected Item-Total Correlation of only 0.333, so we exclude and test again. For the second test, the result is as follows:

Table 5: The outcomes of the reliability and validity assessment

Name of Scale	**Corrected Item-Total Correlation**	***Cronbach's Alpha (Number of Observed variables)***
Role of IT (ROIT)	0.610-0.704	0.805 (03)
Management commitment (MANA)	0.613-0.785	0.874 (04)
Competitive intensity (COMP)	0.513-0.692	0.781 (03)
Digital knowledge and skills of employees (KNOW)	0.674-0.836	0.892 (04)
Strategic orientation (STRA)	0.631-0.709	0.815 (03)
Digital transformation (DIGI)	0.755-0.835	0.900 (03)

Table 5 shows that all variables exhibited Cronbach's Alpha values exceeding 0.6, signifying their suitability for analytical purposes. These scales encompassed 17 variables, comprising 14 independent and three dependent variables.

The results from Table 6 indicate that the Kaiser-Meyer-Olkin (KMO) measure yielded a value of 0.860, falling within the acceptable range of 0.5 to 1. Bartlett's Test of Sphericity also demonstrated statistical significance with a P-value equal to 0.00. Consequently, the application of the Exploratory Factor Analysis (EFA) model for evaluating the scale values of the independent variables was deemed appropriate:

Table 6: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.860
Bartlett's Test of Sphericity	Approx. Chi-Square	2267.635
	Df	136
	Sig.	.000

The results from the analysis presented in Table 7 reveal that the observed variables contributed to a substantial 68.38% of the variance in the underlying factors, exceeding the 50% threshold. Consequently, the suitability of the Exploratory Factor Analysis (EFA) model was confirmed, leading to the endorsement of the scale.

Table 7: Total variance explained

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.554	38.553	38.553	6.554	38.553	38.553
2	2.268	13.339	51.892	2.268	13.339	51.892
3	1.666	9.802	61.694	1.666	9.802	61.694
4	1.137	6.687	**68.380**	1.137	6.687	**68.380**
5	...					

It renamed four groups of variables, including Management commitment with and about the Role of IT (ITMA) - (ROIT1, ROIT2, ROIT3, MANA1, MANA2, MANA3, MANA4); Digital knowledge and skills of employees (KNOW) - (KNOW1, KNOW2, KNOW3, KNOW4); Strategic orientation (STRA) - (STR2, STRA3, STRA4); and Competitive intensity (COMP) - (COMP1, COMP2, COMP3). The Exploratory Factor Analysis (EFA) results about the independent variables in the rotation factor matrix (Table 8) demonstrate the presence of significant factor loadings (values exceeding 0.5) for all observed variables. The factor analysis encompassed four distinct factors, which align logically with the initial hypothesis about the respective measurement variables for each factor.

Table 8: Rotated component Matrix

Rotated Component Matrix				
	Component			
	1	2	3	4
ROIT1	.780			
ROIT2	.730			
ROIT3	.734			
MANA1	.660			
MANA2	.658			
MANA3	.674			
MANA4	.698			
COMP1				.594
COMP2				.824
COMP3				.861
KNOW1		.749		
KNOW2		.880		
KNOW3		.877		
KNOW4		.792		

STRA2	.770
STRA3	.865
STRA4	.813

The outcomes presented in Table 9 indicate that the adjusted R-squared (R2) coefficient was 54.5%.

Table 9: Summary of the regression model

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics: R Square Change	F Change	df1
1	.743[a]	.552	.545	.67478981	.552	71.573	4

The ANOVA results in Table 10 revealed that Sig's value in the F-test was statistically significant, with a value less than 0.05. This indicates the suitability of the model and the independent variables (ITMA, KNOW, STRA, and COMP), which accounted for 54.5% of the variation in the dependent variable DIGI. The remaining 45.5% is attributed to factors not explicitly considered within the model.

Table 10: ANOVA results

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	130.361	4	32.590	71.573	.000[b]
	Residual	105.639	232	.455		
	Total	236.000	236			

Based on the results presented in Table 11, the formulation of the regression equation should be as follows:
DIGI = 0.573 * ITMA + 0.316 * KNOW + 0.268 * COMP + 0.228 * STRA.

Table 11. Regression weighting

Coefficients

Model		Unstandardised Coefficients: B	Unstandardised Coefficients: Std. Error	Standardised Coefficients: Beta	t	Sig.
1	(Constant)	-1.717E-16	.044		.000	1.000
	ITMA factor score 1 for analysis 1	.573	.044	.573	13.052	.000
	KNOW factor score 2 for analysis 1	.316	.044	.316	7.200	.000
	STRA factor score 3 for analysis 1	.228	.044	.228	5.181	.000
	COMP factor score 4 for analysis 1	.268	.044	.268	6.104	.000

5 Discussion

This study yields some inferred conclusions. Firstly, the results indicate that the commitment of management and the strategic role of IT are fundamental to the success of digital transformation. Together, they provide the leadership, vision, and technical expertise necessary to navigate the complexities of digitalization. A committed management team and a forward-thinking IT department can drive an organization toward a future where digital technology is a central pillar of its strategy, operations, and competitive advantage. This synergy between management and IT facilitates digital transformation and positions the organization to thrive in the digital age. It means that hypothesis 1 and hypothesis 2 are confirmed, which is consistent with the prior findings of Mihardjo et al. (2019).

Secondly, employees' digital knowledge and skills are foundational to the success of digital transformation initiatives. A digitally proficient workforce facilitates the smooth adoption of new technologies and drives innovation, operational improvements, and cultural change. As such, organizations should prioritize the development of digital competencies among their employees as a strategic component of their digital transformation efforts. This investment in employee skills is not merely a response to the immediate needs of digital projects but a long-term strategy to ensure the organization's resilience and competitiveness in the digital era. This is the confirmation of hypothesis 4, and it was mentioned in prior studies' results of Chaudhuri et al. (2023).

Thirdly, competitive intensity profoundly influences the approach, pace, and success of digital transformation within organizations. It drives companies to adopt digital technologies more rapidly and comprehensively to outperform competitors and meet customers' evolving expectations. While the benefits of this dynamic can be substantial, it also necessitates careful strategic planning and execution to ensure that digital transformation efforts are sustainable and aligned with the organization's long-term goals. In essence, competitive intensity not only shapes the contours of digital transformation but also underscores the critical balance between innovation, strategy, and operational excellence. This result means that hypothesis 3 is confirmed, and this study also supports prior research by Tsai and Su (2022).

Lastly, strategic orientation is a critical determinant of the success and direction of digital transformation initiatives. It influences the selection of digital technologies, shapes the organization's approach to digital transformation, impacts organizational culture, and ensures the scalability and sustainability of digital efforts. As such, organizations must carefully consider their strategic orientation when planning and implementing digital transformation strategies. By aligning digital initiatives with strategic goals and values, companies can ensure that their digital transformation efforts drive meaningful and lasting change. This result confirms hypothesis No.5, and in existing research, scholars have argued the positive influence of strategic orientation on digital transformation capability (Jian et al., 2022).

6 Conclusion

In conclusion, the interplay of management commitment and the role of IT, digital knowledge and skills of employees, competitive intensity, and strategic orientation form a comprehensive framework that critically influences the success of digital transformation in Vietnamese enterprises. Each of these factors contributes uniquely yet synergistically to the digital journey, shaping the ability of these enterprises to navigate the complexities of the digital age.

The research findings suggest that successful digital transformation in enterprises requires a combination of management commitment, technological integration, and employee competency. IT and management's active engagement proves crucial in leading digitalization efforts, ensuring that enterprises not only adapt to technological changes but also leverage them for competitive advantage. Furthermore, employee digital knowledge enhances organizational agility, supporting innovation and operational efficiency. Competitive intensity accelerates the adoption of digital tools, driving enterprises to evolve rapidly in response to market pressures. Lastly, a well-defined strategic orientation provides a clear roadmap for digital initiatives, aligning them with broader business goals to ensure sustainable growth. These conclusions underscore the importance of cohesive leadership, a skilled workforce, and a forward-looking strategy in fostering effective digital transformation. By integrating these factors, enterprises can better navigate the complexities of digitalization, positioning themselves to thrive in an increasingly digital economy.

For practical implications, enterprises should pay attention to some management activities. They must prioritize management's role in digital transformation. Leadership should actively support and guide digital strategies to foster a culture of innovation and adaptability. Providing resources for IT development and employee upskilling can help create a robust foundation for digital transformation. In addition, investing in employee digital competency is essential for successful transformation. Companies should implement training programs that enhance employees' digital skills, enabling them to use new technologies and contribute to organizational innovation effectively. Moreover, enterprises should adopt a strategic orientation that aligns digital transformation efforts with long-term business goals. This ensures that digital initiatives focus on short-term gains and contribute to sustainable growth and competitive advantage. Lastly, firms operating in highly competitive environments must accelerate their digital transformation processes to maintain a competitive edge. Strategic investment in digital tools and infrastructure can help firms respond quickly to market changes and customer demands. These practical implications provide actionable insights for managers and decision-makers aiming to lead their organizations through digital transformation successfully.

The research has limitations, such as limited time and resources, which prevented the examination of other factors impacting the digital transformation of Vietnamese enterprises. Further studies should investigate factors like government support, digital transformation costs, managers' qualifications, cultural and organizational factors in Digital Adoption, etc... that were not covered in this study. Future research could investigate the intersection between sustainability initiatives and digital transformation. This includes understanding how digital tools can be leveraged to achieve sustainability goals, reduce environmental impact, and promote corporate social responsibility (CSR) in the digital era.

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