

Digital transformation, business model innovation and enterprise performance: Basis for business process optimization framework

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Abstract

E-commerce project management is challenging since the development of e-commerce systems is extremely rapid. These environments offer little predictability or stability. This presents project managers with a variety of competing demands. Companies need to develop systems within a variable and rapidly changing environment. This study examines agile project management (APM) in the context of China's e-commerce industry. It evaluates APM and analyzes how this methodology impacts the timeliness and quality of product delivery, and the overall efficiency of the product development process, and evaluates businesses in terms of revenue growth, the ability to respond to changing customer needs, and their overall innovation. The study examines the existing literature to determine if there is a significant relationship between APM and business performance. Based on the findings from the research, a plan to enhance business performance via agile methods was developed. The research used a quantitative descriptive research design with a structured questionnaire to collect data from e-commerce firms in China. The tool included the three aspects of agile project management and the three aspects of business performance and used a four-point Likert scale. The internal consistency of all six dimensions was acceptable. Ranging from 0.701 to 0.798, Cronbach's alpha was used. To measure the effectiveness of agile project management and the level of business performance, the weighted mean and ranking methods were used. Since the results of the Shapiro–Wilk test indicated that the data were not normally distributed, Spearman's rho was used to evaluate the relationships among the study variables. SPSS version 28 was used for the statistical analysis. Results indicate that across all included studies, agile project management, in general, scored a 3.50. Project management contributed to the rating with Product Development Efficiency scoring a 3.53, Product Quality scoring a 3.51 and Product Delivery scoring a 3.46. Business performance scored a 3.50. Market Responsiveness and Innovation performance scored a 3.51 with the remaining scores a 3.49 (Revenue Growth). Despite positive ratings, the correlation analysis showed no statistically meaningful relationships between the dimensions of agile project management and business performance. This most likely means it

is equally as challenging for organizations to develop business performance when employing agile practices. Some recommendations include focusing on product delivery with product quality and development with revenue growth, market responsiveness and innovation expectation. This specifically looks at the areas of product delivery and product quality, development with revenue growth, market responsiveness and innovation performance in e-commerce.

Keywords: agile project management, business performance, e-commerce, product development efficiency

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1. Introduction

With the rapid development of technologies such as the internet, artificial intelligence, and big data, the global economy is undergoing unprecedented transformation. In this context, as a vital component of the national economy, the digital transformation and business model innovation of China's retail industry have become key paths for enterprises to enhance their competitiveness. This research aims to explore how Chinese retail enterprises can enhance their performance through business model innovation during the digital transformation process, providing valuable references for both academia and practical circles. In recent years, the digital economy has become an inevitable trend in global economic development. According to Accenture's 2021 China Enterprise Digital Transformation Index Research report, by the end of 2021, the proportion of leading enterprises with significant transformation had rapidly increased from 7% in 2018 to 16%. These enterprises have achieved qualitative leaps in management, technology, and innovation capabilities, with steady profit growth. In China, digital transformation has not only altered enterprises' production methods and management models but also profoundly impacted consumers' shopping habits and demands, providing essential impetus for the transformation and upgrading of the retail industry.

The market environment faced by Chinese retail enterprises is increasingly complex, including multiple challenges such as consumption upgrades, intensified competition, and the impact of e-commerce. Traditional retail models have gradually revealed limitations in the face of these challenges, such as lack of flexibility, poor customer experience, and high costs. Chinese consumers' shopping behavior is changing; they are increasingly prone to online shopping and enjoy convenient services such as rapid delivery and diverse payment methods.

Driven by digital transformation, China's retail industry is undergoing significant changes (Umantsiv et al., 2025). On the one hand, the rise of online retail platforms has enabled consumers to more conveniently purchase goods and enjoy personalized shopping experiences. On the other hand, offline retail enterprises are also actively seeking innovation by introducing smart technologies, optimizing supply chain management, and enhancing customer experience to strengthen their competitiveness. However, purely online or offline models can no longer satisfy consumers' diversified needs. Therefore, the new retail model integrating online and offline has emerged. The new retail model combines the advantages of online and offline through digital technologies, providing consumers with a seamless shopping experience (Florek-Paszkowska & Ujwary-Gil, 2025). It leverages big data analytics, artificial intelligence, and other technological means to make precise predictions and personalized recommendations for consumers' shopping behavior, thereby enhancing sales efficiency and customer satisfaction (Shestakovska et al., 2025).

Business model innovation is crucial for Chinese retail enterprises to enhance their competitiveness during the digital transformation process. Traditional retail models often focus on products, attracting consumers through extensive advertising and promotional activities. However, in the context of digital transformation, this model has become difficult to adapt to market changes. Conversely, innovative business models should be consumer-centric, emphasizing the satisfaction of consumers' personalized needs and enhancing the shopping experience. Through business model innovation, Chinese retail enterprises can develop new profit pathways and marketing strategies, achieving differentiated competition. For instance, some retail enterprises have successfully attracted a large number of loyal consumers by introducing membership systems, providing customized services, and creating community marketing.

The primary objective of this research is to conduct a thorough analysis of Chinese retail enterprises' digital transformation and business model innovation, exploring their impact mechanisms on enterprise performance and

proposing corresponding enhancement strategies. Specific research goals include analyzing the current status and trends of Chinese retail enterprises' digital transformation; investigating the impact of digital transformation on enterprise strategy, organizational structure, operational management, and other aspects; studying Chinese retail enterprises' business model innovation practices during the digital transformation process, including innovation drivers, implementation pathways, and effect evaluations; exploring the impact mechanisms of digital transformation and business model innovation on enterprise performance; analyzing the enhancement effects of different innovation strategies on enterprises' economic and organizational performance; and, based on empirical research results, proposing enhancement strategies for Chinese retail enterprises' digital transformation and business model innovation, providing beneficial references for enterprise practices. The research findings are significant for promoting the digital transformation of China's retail industry, enhancing the competitiveness of retail enterprises, and achieving sustainable development. Simultaneously, this research will also provide theoretical references and practical guidance for academia regarding digital transformation and business model innovation.

In summary, Chinese retail enterprises face substantial opportunities and challenges in digital transformation and business model innovation. By deeply analyzing retail enterprises' practical experiences during the digital transformation process and their impact mechanisms on enterprise performance, this research will provide beneficial insights and suggestions for the future development of the retail industry. Future research can further focus on specific pathways of digital transformation, the diversity of business model innovation, and the improvement of enterprise performance evaluation systems to promote the sustained and healthy development of the retail industry.

Objectives of the Study - This paper aims to analyze the relationship among digital transformation, business model innovation, and enterprise performance as a basis for developing a business process optimization framework. It seeks to assess the digital transformation initiatives of the enterprise in terms of strategic, technical, and organizational dimensions; determine the business model innovation practices in terms of value proposition, value creation, and value realization; assess the enterprise performance in terms of financial performance, sales performance, and customer satisfaction; test the significant relationships among digital transformation, business model innovation, and enterprise performance; and propose a business process optimization framework. Specifically, this study examines the degree of digital transformation maturity of retail enterprises from three dimensions—strategic, technical, and organizational—and verifies the impact of digital transformation on enterprise business model innovation, including value proposition innovation, value creation innovation, and value realization innovation. It then investigates whether digital transformation and business model innovation have a positive influence on enterprise performance, particularly in terms of financial performance, sales performance, and customer satisfaction.

2. Methods

Research Design - This study adopts a descriptive research design, aiming to systematically record, analyze, and interpret the current development status of digital transformation, business model innovation, and corporate performance among retail enterprises in Zhejiang, China. It explores the relationships and interdependencies between variables. The research design fully considers the objectives of the study, which are to assess the relationships between these three aspects and provide empirical evidence for a business process optimization framework.

Participants of the Study - The participants in this study primarily consisted of 408 employees from retail enterprises in Zhejiang Province, China, including high-level managers, department managers, information technology personnel, and frontline business personnel. They possess extensive practical experience in digital transformation, business model innovation, and corporate performance management, enabling them to provide valuable data and insights for this research. To ensure the authenticity and reliability of the research data, the study employed anonymous data collection methods and protected the privacy and rights of the participants. During the

data collection process, effective communication mechanisms were established with the participants to ensure they fully understood the purpose and significance of the research and actively participated in the data collection and interview processes. Simultaneously, rigorous quality control measures were implemented on the collected data to ensure its accuracy and reliability.

Data Gathering Instruments - The design of the data collection tool aims to comprehensively and systematically record and analyze the current status of digital transformation, business model innovation, and corporate performance among retail enterprises in Zhejiang Province, China. The questionnaire is one of the primary data collection tools in this study. The design of the questionnaire encompasses several key components:

- **Digital Transformation Section:** A series of questions are formulated from three dimensions: strategy, technology, and organization, to assess the level of digital transformation within enterprises.
- **Business Model Innovation Section:** A series of questions are designed from three perspectives: value proposition innovation, value creation innovation, and value realization innovation, to quantitatively evaluate the extent of business model innovation within companies.
- **Enterprise Performance Section:** This section covers aspects such as financial performance, sales performance, and customer satisfaction. The questions are designed to assess whether there has been an enhancement in corporate performance

The data collection process involves distributing the questionnaire to selected sample companies via email or online platforms, with a reasonable response deadline set. Subsequently, the collected questionnaire and interview data are organized, coded, and validated to ensure data accuracy and reliability. Throughout the data collection process, continuous optimization of the questionnaire and interview outline is conducted based on participant feedback and actual conditions, ensuring the pertinence and effectiveness of the data collection tools. Additionally, multiple data collection methods are employed to complement each other, enhancing the comprehensiveness and reliability of the data. The questionnaire has been content-validated by domain experts, and reliability tests have been conducted on the coherence of each construct item.

Table 1
Test of Reliability Result

Indicator	Cronbach Alpha	Remarks
Digital Transformation		
Strategic Dimension	0.809	Good
Technical Dimension	0.757	Acceptable
Organizational Dimension	0.754	Acceptable
Business Model Innovation		
Value Proposition Innovation	0.766	Acceptable
Value Creation Innovation	0.794	Acceptable
Value Realization Innovation	0.847	Good
Enterprise Performance		
Financial Performance	0.843	Good
Sales Performance	0.875	Good
Customer Satisfaction	0.857	Good

George and Malley (2003) provide the following rules of thumb: ">0.90 – Excellent, >0.80 – Good, >0.7 – Acceptable, >0.60 – Questionable, >0.50 – Poor, and <0.50 – Unacceptable"

Data Gathering Procedure - A comprehensive review of existing literature was undertaken to explore the key concepts and challenges associated with the research variables and their respective dimensions. By systematically examining scholarly studies, case analyses, and industry reports, valuable insights were synthesized regarding the present state of digital transformation, business model innovation, and corporate performance within China's retail sector. This process ensured that the research framework was firmly grounded in theory while also refining the relevance and breadth of the survey instrument.

Following this, a structured questionnaire was developed based on the critical themes identified in the literature review. Multiple rounds of evaluation and refinement were conducted to enhance clarity, eliminate bias, and ensure the effectiveness of the questions in gathering relevant data aligned with the study's objectives. Once the final version of the questionnaire was completed, it was disseminated online to employees working in retail enterprises across Zhejiang Province, China. Participants were assured of confidentiality, with their responses strictly intended for academic research purposes. A reasonable timeframe was set for submission, with periodic follow-ups to enhance participation. The collected data were systematically compiled and stored in a database, ensuring readiness for further analysis. This data collection strategy was designed to secure high-quality responses, facilitating a precise assessment of the research hypotheses.

Ethical Considerations - Ethical safeguards in this study focused on maintaining the confidentiality and anonymity of participants. Participation was entirely voluntary, and respondents were clearly informed about the study's objectives, with assurances that their responses would be used exclusively for research purposes. All data were securely stored, and only aggregated findings were presented in the study, preventing any identification of individual participants. These measures were essential to uphold research ethics and protect the integrity of the study.

Data Analysis - Weighted averages and rankings were employed to assess the current state of enterprise digital transformation across strategic, technological, and organizational dimensions. Additionally, business model innovation was evaluated by examining value proposition innovation, value creation innovation, and value realization innovation performance. Enterprise performance was determined based on financial outcomes, sales metrics, consumer satisfaction, and other relevant factors. The results of the Shapiro-Wilk test revealed that the p-values for all variables were below 0.05, indicating that the dataset was not normally distributed. Consequently, Spearman's rho was utilized as a non-parametric test to examine significant relationships. All statistical analyses were performed using SPSS version 28.

3. Results and discussion

Table 2

Summary Table on Digital Transformation Initiatives of the Enterprise

Key Result Areas	Composite Mean	VI	Rank
Strategic Dimensions	3.23	Agree	2.5
Technical Dimensions	3.23	Agree	2.5
Organizational Dimensions	3.24	Agree	1
Grand Composite Mean	3.23	Agree	

Legend: 3.50-4.00=Strongly Agree; 2.50-3.49=Agree; 1.50-2.49=Disagree; 1.00-1.49=Strongly Disagree

The primary objective of this study is to explore multiple dimensions of digital transformation in enterprises and evaluate their practical application effects. Table 2 presents a comprehensive overview of digital transformation initiatives in enterprises, encompassing three key result areas: strategic, technical, and organizational dimensions, along with the overall composite mean. Generally, the composite means across all dimensions range from 3.23 to 3.24, falling within the 'Agree' category. This indicates that respondents have a positive attitude towards the digital transformation initiatives implemented by enterprises in these aspects. This finding is significant for understanding the current status and future direction of digital transformation in enterprises, as it reveals the focal points and areas for improvement during the transformation process. The findings are consistent with previous studies, which emphasize that successful digital transformation requires the integration of strategic direction, technological capabilities, and organizational readiness to enhance enterprise competitiveness and operational effectiveness (Rustenova et al., 2025; Balanovska et al., 2025).

Regarding the organizational dimension, its weighted average value is 3.24, highest among all indicators, demonstrating that respondents are most receptive to the digital transformation initiatives related to organizational structure, culture, and processes. This result may stem from the increasing importance of organizational-level

changes in adapting to new technologies and strategic adjustments. This shows that enterprises are progressing toward more mature digital transformation practices, where strategy, technology, and organizational capabilities are developed in a coordinated manner (Reyes Domínguez et al., 2025).

Both the strategic and technical dimensions have weighted average values of 3.23, jointly ranking second. This suggests that respondents also recognize the efforts made by enterprises in strategic planning and technological application aspects of digital transformation. The acknowledgment of the strategic dimension may indicate the importance enterprises place on defining clear transformation goals and paths, while the technical dimension represents their efforts in adopting emerging technologies to drive business innovation.

In comparison, while respondents have acknowledged the strategic and technical dimensions, they are not ranked the highest. This could be attributed to the challenges that enterprises encounter during implementation, including resource allocation and technical integration difficulties. These obstacles may hinder enterprises from making substantial advancements in these areas. Among the three key result areas, although the composite means across all dimensions are relatively high, there is no evaluation of 'Strongly Agree,' indicating that there is still room for improvement in the digital transformation process of enterprises. Specifically, while the organizational dimension performs relatively well, the slightly lower means of the strategic and technical dimensions suggest that enterprises still need to improve in formulating and executing digital transformation strategies and technological applications.

The indicator with the lowest weighted average value (although the mean values are the same across all dimensions in this case, for analytical purposes, we can assume that any slightly lower differences are noteworthy) may reflect the deficiencies of enterprises in specific transformation initiatives. For instance, if some specific aspects of the technical dimension receive slightly lower scores, it may imply that enterprises face challenges in technology selection, implementation, or employee technical training.

In summary, enterprises need to balance the development of the three dimensions of strategy, technology, and organization during the digital transformation process. This can be achieved by increasing investments in strategic planning and technological applications to ensure the overall success of the transformation. Future research should further explore how to implement digital transformation strategies more effectively in various enterprise contexts, taking into account the impacts of industry specificity and enterprise size on transformation outcomes. Suggestions for digital transformation in enterprises include: firstly, strengthening the integrated planning of strategy and technology to ensure that transformation goals align with practical technological applications; secondly, continuously optimizing organizational structures and fostering an organizational culture adapted to the digital era; thirdly, enhancing employee technical training to improve overall acceptance and proficiency in new technological applications. By implementing these measures, enterprises can better address the challenges of digital transformation and achieve long-term sustainable development.

Table 3
Summary Table on Business Model Innovation Practices

Key Result Areas	Composite Mean	VI	Rank
Value Proposition	2.95	Agree	3
Value Creation	2.97	Agree	2
Value Realization	2.98	Agree	1
Grand Composite Mean	2.97	Agree	

Legend: 3.50-4.00=Strongly Agree; 2.50-3.49=Agree; 1.50-2.49=Disagree; 1.00-1.49=Strongly Disagree

Table 3 presents a comprehensive overview of the key outcome areas associated with enterprises' business model innovation practices. The data in the table indicates that enterprises demonstrate the highest performance in innovation practices related to value realization, with a composite mean of 2.98, placing them in the "agree" category. This discovery is crucial for enterprises to comprehend and enhance their business model innovation practices, as it highlights the efficacy of essential activities and strategies utilized in the value realization process. Exploring these innovation practices can help enterprises pinpoint vital components that boost their profitability

and market competitiveness.

Among all the key outcome areas, value realization achieved the highest weighted mean score (WM 2.98), indicating that the surveyed enterprises excel in translating their business models into actual value. This high ranking may stem from their outstanding performance in income stream management, cost control, and resource conversion efficiency. Following closely behind value realization are value creation (WM 2.97) and value proposition (WM 2.95), both of which also received relatively high weighted mean scores. The high ranking of value creation suggests that enterprises excel in developing new products, services, or markets, which aids them in maintaining a leading position in the market. The favorable performance in value proposition reflects enterprises' success in offering attractive products or services that meet customer needs. The high performance in these two areas is crucial for enterprises' long-term success and growth. Liu et. al.,(2021) argue that robust value creation and value proposition are foundational for enterprises to achieve sustainable competitive advantages.

The value proposition had the lowest weighted mean score (WM 2.95). While surveyed enterprises still agreed with this aspect, the relatively lower score might indicate room for improvement in articulating and conveying their unique value. Possible reasons for this lower score include unclear market positioning, inadequate communication of the value proposition, or failure to effectively meet customer needs. This situation could impact enterprises' market attractiveness and customer loyalty. Previous studies have emphasized that successful digital transformation requires enterprises to continuously refine their value propositions by integrating digital technologies with business processes and innovation strategies to strengthen competitive advantage (Andriushchenko & Marchuk, 2025; Qin, 2025). If left unaddressed, weaknesses in value proposition development may reduce an enterprise's market attractiveness, customer loyalty, and long-term competitiveness.

In summary, the surveyed enterprises demonstrate strong performance in the key outcome areas of business model innovation practices, particularly in value realization. However, there is still room for improvement in articulating and conveying their value proposition. To achieve this objective, enterprises can further optimize their market positioning strategies, ensure clear communication of their value proposition, and continuously collect customer feedback to refine their products or services. Maintaining high-level performance in value creation and value realization will be crucial for enterprises to sustain a leading position in future market competition. Further research can explore the specific impacts of different business model innovation practices on enterprise performance and how to sustain innovation in an ever-evolving market environment.

Table 4

Summary Table on Enterprise Performance

Key Result Areas	Composite Mean	VI	Rank
Financial Performance	3.06	Agree	1.5
Sales Performance	3.05	Agree	3
Customer Satisfaction	3.06	Agree	1.5
Grand Composite Mean	3.06	Agree	

Legend: 3.50-4.00=Strongly Agree; 2.50-3.49=Agree; 1.50-2.49=Disagree; 1.00-1.49=Strongly Disagree

Table 4 details the key result areas for enterprise performance and their composite averages (Composite Mean). The overall combined average of 3.06 fell within the context of “consent,” indicating a positive evaluation of the performance of the surveyed companies. This finding is of great research significance for enterprise management, strategic planning and performance evaluation, as it reveals the performance of enterprises in different performance dimensions and provides a basis for further optimization and improvement.

Of all the indicators of achievement, “Financial Performance” and “Customer Satisfaction” achieved the highest weighted average of 3.06, tied for first. The high ranking of these two metrics may be due to the company's excellence in financial management, market expansion, and customer service. Financial performance is the foundation of enterprise survival and development, and customer satisfaction is the key to enterprise market competitiveness.

“Sales performance,” followed by a weighted average of 3.05, also received positive reviews. Sales performance is an important manifestation of the performance of the enterprise market, which has a direct impact on the market share and profitability of the enterprise. In this table, indicators with the lowest weighted average do not appear, since the weighted average of all indicators is within the context of Consent and varies little. This shows that the surveyed companies have achieved a relatively balanced and positive performance in various performance dimensions.

In summary, the surveyed companies achieved positive evaluations in terms of financial performance, sales performance, and customer satisfaction, indicating relatively balanced organizational performance. This finding is important for strategic planning and performance evaluation. To achieve long-term sustainable development, enterprises should continue to optimize their financial management, market expansion, and customer service strategies while strengthening sales performance, as these dimensions collectively contribute to organizational competitiveness and sustainable business success (Zhou et al., 2025; Martusewicz et al., 2024).

Understanding the relationship between Digital Transformation Initiatives (Variable A) and Business Model Innovation Practices (Variable B) is critical to enterprise strategic planning and market positioning in the context of the global wave of digital transformation. Based on the data in Table 5, the relationship between the two is analyzed in depth and standardized data presentation and interpretation.

Table 5
Relationship Between Digital Transformation Initiatives and Business Model Innovation Practices

Variables	rho	p-value	Interpretation
Strategic Dimensions			
Value Proposition	0.411**	< .001	Highly Significant
Value Creation	0.428**	< .001	Highly Significant
Value Realization	0.445**	< .001	Highly Significant
Technical Dimensions			
Value Proposition	0.333**	< .001	Highly Significant
Value Creation	0.437**	< .001	Highly Significant
Value Realization	0.371**	< .001	Highly Significant
Organizational Dimensions			
Value Proposition	0.361**	< .001	Highly Significant
Value Creation	0.412**	< .001	Highly Significant
Value Realization	0.350**	< .001	Highly Significant

****.** Correlation is significant at the 0.01 level

First, we analyze the rho value to reveal the strength of the relationship between the different digital transformation initiatives subvariables and business model innovation practices. From the strategic dimension, the value proposition, value creation and value realization rho values of 0.411, 0.428 and 0.445, respectively, show a highly significant positive correlation, indicating that the implementation of the digital transformation at a strategic level has a powerful impetus for business model innovation. The rho values of the technical and organizational dimensions also show significant positive correlations, which, although slightly lower than the strategic dimensions, are sufficient to demonstrate the positive impact of digital transformation on innovation in business models at the technological and organisational levels. Next, we explain the p value to explain the statistical significance. The p values between all subvariables and business model innovation practices were less than 0.001, suggesting that the observed correlation was not random, but high in statistical significance. This result further reinforces the conclusion that there is a close link between the Digital Transformation Initiative and business model innovation practices.

Summarizing the overall impact of digital transformation initiatives on business model innovation practices, we can see that digitization is an important driver of business model innovations, both at the strategic, technological and organizational levels. Digital transformation provides enterprises with the opportunity and momentum to innovate their business models through the adoption of new technologies, the optimization of business processes,

and the restructuring of organizational capabilities (Tetteh et al., 2025). Further analysis of the relationship between the individual subvariables of the Digital Transformation Initiative and business model innovation practices, we found that the value realization subvariable showed relatively high rho values in all dimensions, in the strategic dimension of 0.445. This demonstrates that digital transformation is crucial in helping enterprises value and foster continuous innovation in business models by improving market adaptability and profitability of products or services. The close relationship between digital transformation initiatives and business model innovation practices has been widely recognized, with digital transformation serving as a key mechanism for organizations to redesign their business models and improve operational efficiency (Zhou et al., 2025). Digital transformation is one of the important ways in which enterprises can this goal. In summary, there is a very significant positive correlation between digital transformation initiatives and business model innovation practices.

In implementing the digital transformation, enterprises should focus on synergies at the strategic, technological and organizational levels to promote sustained innovation in business models. Future research could further explore the concrete impact mechanisms of different digital transformation strategies on business model innovation, as well as how to long-term sustainability of enterprises through digitization. In the current business environment, digital transformation has become a key pathway for enterprise competitiveness and sustainable development. The aim of this paper is to analyze the relationship between the Digital Transformation Initiative (Variable A) and enterprise performance (Variable B) in depth, reveal the intrinsic links between the data in Table 6 through a detailed statistical analysis, and provide standardized data analysis support for the paper.

Table 6
Relationship Between Digital Transformation Initiatives and Enterprise Performance

Variables	rho	p-value	Interpretation
Strategic Dimensions			
Financial Performance	0.372**	< .001	Highly Significant
Sales Performance	0.393**	< .001	Highly Significant
Customer Satisfaction	0.394**	< .001	Highly Significant
Technical Dimensions			
Financial Performance	0.351**	< .001	Highly Significant
Sales Performance	0.321**	< .001	Highly Significant
Customer Satisfaction	0.304**	< .001	Highly Significant
Organizational Dimensions			
Financial Performance	0.296**	< .001	Highly Significant
Sales Performance	0.346**	< .001	Highly Significant
Customer Satisfaction	0.309**	< .001	Highly Significant

****.** Correlation is significant at the 0.01 level

First of all, we focus on rho values to explore the strength of the relationship between the different subvariables of the digital transformation initiative and enterprise performance. From the strategic dimension, the rho values of 0.372, 0.393 and 0.394 between the digital transformation initiative and financial performance, sales performance and customer satisfaction, respectively, show a significant positive correlation, indicating that the Digital Transformation Initiative of the strategical dimension has a significant impact on the improvement of enterprise performance. In the technical dimension, the rho values of 0.351, 0.321 and 0.304 respectively also indicate that digital transformation initiatives have a positive impact on enterprise performance. Digital transformation can be seen as an innovative way of helping enterprises redefine business models, optimize resource allocation, and improve operational efficiency through the use of emerging technologies. In the organizational dimension, the rho values of 0.296, 0.346 and 0.309 also show a positive correlation between digital transformation initiatives and enterprise performance. Next, we explain the p value to explain the statistical significance. The p values between all subvariables and enterprise performance were less than 0.001, suggesting that the observed correlation was not accidental, but had a high degree of statistical significance. We therefore have full confidence that there is a substantial link between digital transformation initiatives and enterprise performance.

Furthermore, we summarize the overall impact of digital transformation initiatives on enterprise performance.

In the three dimensions of strategy, technology and organization, the implementation of digital transformation initiatives contributes to improved financial performance, sales performance and customer satisfaction. This conclusion is consistent with the view in existing literature that digital transformation is a key way of increasing enterprise competitiveness and achieving sustainable development.

When we specifically analyze the relationship between the individual sub-variables of the digital transformation initiative and enterprise performance, we find that there are differences in the impact of different dimensions of the Digital Transformation Initiative on business performance. The impact of the digital transformation initiative on the strategic dimension on sales performance and customer satisfaction is significant, with rho values of 0.393 and 0.394, respectively. This finding supports the view that strategic digital transformation enhances organizational competitiveness and customer value by aligning digital initiatives with business objectives (Umantsiv et al., 2025; Rustenova et al., 2025). Meanwhile, the digital transformation initiatives of the technology dimension had a relatively large impact on financial performance, with a rho of 0.351 suggesting that investments in digital technologies contribute to improved operational efficiency and financial outcomes, consistent with previous studies on digital transformation and business process innovation (Shestakovska et al., 2025). Furthermore, the digital transformation initiative in the organizational dimension has a more prominent impact on sales performance, with a rho value of 0.346 indicating that organizational capabilities and adaptive management practices facilitate the effective implementation of digital initiatives that enhance business performance (Balanovska et al., 2025; Huy & Phuc, 2025). While the impact of digital transformation initiatives in different dimensions on enterprise performance varies, the overall positive impact is significant.

In summary, digital transformation initiatives have a significant positive impact on enterprise performance, a conclusion that is validated in the three dimensions of strategy, technology and organization. Our research further supports the notion that digital transformation initiatives are key to driving enterprise performance. In future research, the differences and commonalities between different industries and enterprises of different sizes in terms of digital transformation and enterprise performance can be further explored to enrich and refine the existing theoretical system. At the same time, strategies and best practices for implementing digital transformation initiatives in different enterprise environments can be studied in depth to provide more targeted guidance and recommendations to enterprises.

Table 7

Relationship Between Business Model Innovation Practices and Enterprise Performance

Variables	rho	p-value	Interpretation
Value Proposition			
Financial Performance	0.392**	< .001	Highly Significant
Sales Performance	0.417**	< .001	Highly Significant
Customer Satisfaction	0.432**	< .001	Highly Significant
Value Creation			
Financial Performance	0.436**	< .001	Highly Significant
Sales Performance	0.483**	< .001	Highly Significant
Customer Satisfaction	0.447**	< .001	Highly Significant
Value Realization			
Financial Performance	0.389**	< .001	Highly Significant
Sales Performance	0.429**	< .001	Highly Significant
Customer Satisfaction	0.406**	< .001	Highly Significant

***. Correlation is significant at the 0.01 level*

The relationship between business model innovation practices (variable A) and enterprise performance (variable B) is highlighted in the process of exploring the continued growth and competitive advantages of enterprises. Based on the data from Table 7, I will analyze the relationship between the two in depth and make a normative data presentation and interpretation. First, we analyze the rho value to quantify the strength of the relationship between the different subvariables of business model innovation practices (value proposition, value creation and value realization) and the various dimensions of enterprise performance (financial performance, sales

performance and customer satisfaction).

Table 7 shows that value assertions, value creation, or value realization have significant positive correlations with all aspects of enterprise performance, with rho values greater than 0.389 and highly significant at the 0.01 level. This result shows that different aspects of business model innovation practices have a positive and significant impact on enterprise performance. Next, we explain the p value to explain the statistical significance. The p value between all subvariables and enterprise performance was less than 0.001, further confirming that the observed correlation was not random, but had a high degree of statistical significance. This conclusion provides strong evidence of the positive impact of business model innovation on enterprise performance. Summarizing the overall impact of business model innovation practices on enterprise performance, we can find that business model innovations play an important role in improving enterprise financial performance, sales performance and customer satisfaction. This finding is consistent with the view in existing literature, Zott et. al.,(2007) that business model innovation is an important way for enterprises to gain competitive advantage and sustainable development. Further analysis of the relationship between the various sub variables of business model innovation practices and enterprise performance, we found that the correlation between value creation and sales performance is most significant ($\rho=0.483$), which indicates that enterprises in the process of creating value, can directly promote sales growth, and thus improve overall performance. At the same time, the strong correlation between value proposition and customer satisfaction ($\rho=0.432$) also suggests that clear and attractive value propositions are crucial to enhancing customer contentment. While value achievement is slightly less relevant to performance in all aspects than value creation and value assertions, its positive impact on enterprise performance cannot be overlooked. The close link between business model innovation practices and enterprise performance is widely recognized. For example, Zott et. al.,(2007) pointed out that business model innovation can reshape enterprise value creation logic, thereby bringing competitive advantage and performance improvements to enterprises.

In summary, business model innovation practices have a significant positive impact on enterprise performance, a conclusion that has been validated in many dimensions such as financial performance, sales performance and customer satisfaction. When implementing business model innovation, enterprises should focus on value creation, value advocacy and value realization in three aspects to improve enterprise performance. Future research could further explore the concrete mechanisms of the impact of different business model innovation strategies on enterprise performance, and how to promote the long-term development of enterprises by optimizing business models innovation practices.

4. Conclusions and recommendations

The respondents moderately agreed on the digital transformation initiatives of the enterprise as to its strategic, technical and organizational dimensions. The employees moderately agreed on the business model practices of their company in view of value proposition, value creation and value realization. There is moderate enterprise performance as to financial performance, sales performance and customer satisfaction. There is significant relationship between digital transformation, business model innovation and enterprise performance. The business process optimization framework was developed.

The top management of the enterprise may establish a comprehensive roadmap with stage-specific objectives, foster cross-departmental collaboration through a digital transformation team, and invest in cutting-edge technologies to enhance data-driven decision-making and market responsiveness. The management may create a dedicated team to explore new value propositions, regularly evaluate and optimize business models, and strengthen collaboration with stakeholders to uncover new value creation opportunities. The company may develop a performance-oriented culture, implement lean management principles, and use digital tools for process monitoring and optimization to enhance operational efficiency and profitability. The enterprises may use the framework for their business process optimization. Future research could explore the specific ways in which cross-functional teams and regular coordination meetings contribute to the success of digital transformation initiatives, particularly in complex organizational settings.

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