

# The effect of strategic management on enterprises performance in manufacturing of China: The mediating role of digital management

**Bai Minghui**

*Universiti Sains Malaysia*

Email: baiminghui@student.usm.my

**Shankar Chelliah \***

*Universiti Sains Malaysia*

Email: shankarchelliah1@gmail.com

*\* Corresponding Author*

## **Abstract**

**Purpose:** This study examines how strategic management affects business performance in China's manufacturing sector, emphasizing the role that digital management plays as a mediator. Strategic innovation and digital transformation are imperatives for China's manufacturing sector's sustainable development, given the intense global rivalry for manufacturing markets. The three primary goals of the study are as follows: (1) Determining whether strategic management are positively correlated enterprise performance in China's manufacturing sector; (2) Examining the impact of digital management on enterprise performance in the same industry; and (3) Analyzing the advantages of digital management on strategic management in China's manufacturing sector.

**Methodology:** In this study, descriptive data were tested using SPSS based on the available data.

**Findings:** From the results, the process of applying an approach demonstrates, based on the outcomes, the strategic management significantly enhances enterprise performance. Furthermore, the level of strategy can indeed support enhanced enterprise performance when several exogenous variables are added, provided that other conditions remain the same demonstrating how the relationship between strategic management and enterprise performance is positively regulated by digital transformation.

**Research limitations:** The spatial impact of digital management on the industrial industry's resilience is empirically tested in this paper. However, the impact of the digital economy on the Manufacturing's resilience in various regions, industries, or types has not been fully examined in this paper; additional analysis can be done to account for the impact's regional and industry heterogeneity in the future.

**Practical Implications:** Following an assessment of China's manufacturing state at present, this paper emphasizes the importance of strategic management in the manufacturing sector, interprets the strategic management of manufacturing content, and suggests pertinent measures.

**Originality:** This study examines the interrelationships among enterprise performance, digital management, and strategic management. It also elucidates the function of digital management in respect to these relationships and draws some important research results.

**Keywords:** Manufacturing, Strategic Management, Digital Management,

## Introduction

The manufacturing sector in China occupies a unique position, driven by both internal growth and the evolving dynamics of the global economy. A strategic road map for 2023 was unveiled at the Central Economic Work Conference in Beijing in December 2022. The strategy underscores the critical importance of enhancing core innovative technologies, advancing key manufacturing chains, and improving global competitiveness through sustainable practices. This agenda underscores the imperative of supporting established sectors and accelerating the adoption of innovative technologies, which are pivotal in guiding the manufacturing sector towards higher value-added domains and fostering robust economic resilience.

During the May 5, 2023, executive meeting led by Premier Li Qiang, additional plans were presented to enhance the growth of advanced manufacturing clusters and encourage industry transformation towards higher levels. The advancement of technical innovation depends on these initiatives, promoting intelligent manufacturing capabilities in the industry and hastening the adoption of premium manufacturing techniques.

China's manufacturing sector remained the world's most productive in 2022, adding a substantial \$4.35 trillion (or 3% rise in value-added) to the country's GDP. China's industrial prowess and economic leadership are dependent on the industry, as seen by its growth trajectory and resilience in the face of global problems (Zhou et al., 2022). The following chart shows the manufacturing value added and GDP share in China from 2017 to 2022.

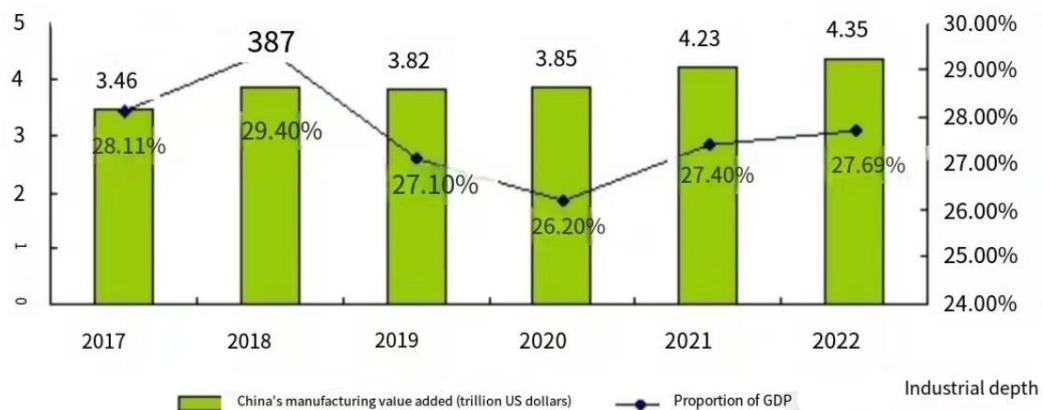


Figure 1.1 Manufacturing value added and GDP share in China, 2017-2022

Source : Office of National Statistics (2023)

China's proactive involvement in the global industrial environment, particularly in promoting the ideas of "Industry 4.0," was demonstrated at the Hannover Messe 2014. This historic occasion made clear how important it is to improve manufacturing using smart technologies, network integration, and increased resource efficiency in order to handle issues like resource scarcity, energy transition, and globalization in the future.

In today's corporate environment, strategic management is essential for organizations. The development and implementation of an organization's long-term goals are included in strategic management, which also includes an examination of the external environment and a thorough evaluation of internal resources and capabilities. The creation of adaptable strategies suited to achieving sustainable growth is made easier by this procedure. In addition to helping businesses stand out from the competition, effective strategic management creates a solid foundation for future development and decision-making (David & David, 2016; Hill et al., 2020).

The State Council launched "Made in China 2025" on May 8, 2015, as a national initiative to advance China into an intelligent manufacturing era with a focus on innovation-driven growth and industrial upgrading (Sorbino, 2020). To counteract growing expenses, demographic changes, and environmental concerns, China must step up its efforts in automation, digital management, and operational efficiency as it moves from an industrial level of 2.0 to 3.0. However, obstacles still exist (Huang et al., 2022).

The intricate nature of digital management systems in the industrial sector highlights the necessity for integrated solutions that balance operational efficiency and equipment reliability with production process optimization (Barykin et al., 2021; Yildiz et al., 2021). Total Optimal Equipment Management (T-PM) and the equipment butler system are two examples of innovative approaches to industrial service optimization and predictive maintenance that are essential for improving equipment availability and cutting costs (Al-Digs, 2021; Wong et al., 2021; Munirathinam, 2020).

To put it briefly, China's manufacturing industry needs to navigate these transformative routes in order to maintain its global leadership, improve competitiveness, and promote sustainable growth in an increasingly complicated economic context.

### **Literature Review**

Digital management is becoming a revolutionary force in the quickly changing global manufacturing scenario. It is necessary for improving operational economies and generating strategic advances. The significance of digital equipment management in facilitating the shift to Industry 4.0 is emphasized by Kerin and Pham (2019). The report emphasizes how important it is to have a strong digital infrastructure in order to optimize production processes and make it easier to integrate cutting-edge technologies seamlessly. In a similar vein, Souza et al. (2020) promote cooperation across various production players in order to create a unified ecosystem for digital equipment management. This cooperative strategy helps Chinese manufacturing companies become more adaptable while also laying the foundation for Industry 4.0 developments.

Digital management is becoming a revolutionary force in the quickly changing global manufacturing scenario. It is necessary for improving operational economies and generating strategic advances. The significance of digital equipment management in facilitating the shift to Industry 4.0 is emphasized by Kerin and Pham (2019). The report emphasizes how important it is to have a strong digital infrastructure in order to optimize production processes and make it easier to integrate cutting-edge technologies seamlessly. In a similar vein, Souza et al. (2020) promote cooperation across various production players in order to create a unified ecosystem for digital equipment management. This cooperative strategy helps Chinese manufacturing companies become more adaptable while also laying the foundation for Industry 4.0 developments. Since digital management can quickly adjust to evolving company procedures and match corporate objectives with market demands. It increases overall operational efficiency.

Additionally, Harmon (2019) asserts that significant advancements in production management are made possible by the incorporation of state-of-the-art information technologies via digital management. This integration includes computerized monitoring systems, product life cycle management, and comprehensive business resource planning. These advancements streamline production procedures and increase competitiveness and cost-effectiveness, which finally raises company sustainability and profitability (Ma et al., 2022).

A human-centered approach to digital management that emphasizes the production and sharing of knowledge among staff members is supported by Andreeva and Kianto (2012). This "people-oriented" management style fosters a collaborative company culture where enhanced staff

competencies drive innovation and operational performance. The foundation of enterprise intelligence is the integration of digital technologies, such as the Internet of Things, cloud computing, and artificial intelligence (AI). This makes system-to-system interactions and complicated decision-making processes possible (Jagatheesaperumal et al., 2021; Yang et al., 2021).

As Williamson (2017) and Pastorino et al. (2019) have pointed out, the advent of big data represents a paradigm change in data-driven decision-making. Businesses can employ big data analysis to explore large databases for insightful information that enhances strategic planning and operational efficacy. China's top digital giants, including Tencent, Baidu, and Alibaba, have been promoting big data technologies more and more, showing how they may transform competitive tactics and commercial operations (Sturgeon, 2021; Lundvall & Rikap, 2022).

Additionally, as noted by Maier-Hein et al. (2022) and Bibri (2019), data science advancements – which make use of statistical analysis, pattern identification, and data visualization – also augment the possibilities of digital management. These techniques not only improve data but also encourage innovation in a range of sectors, including the social sciences and biotechnology.

In response to the constantly shifting opportunities and challenges posed by the digital economy, businesses are shifting from traditional process management toward strategic management frameworks. This strategic pivot, which emphasizes value creation, culture management, and adaptive leadership in navigating complex market dynamics, has been highlighted by Almunawar et al. (2022) and Grant (2021). Businesses may preserve long-term competitiveness in the global market by adopting proactive steps to seize new possibilities by leveraging strategic management techniques.

In summary, digital management plays a critical role in modern Chinese manufacturing companies by facilitating adaptable strategies, streamlining internal operations, and encouraging long-term growth. The way China's industrial landscape develops in the future may be significantly impacted by the way digital technologies and strategic management frameworks operate together. Which would enable businesses to prosper in the face of changing market needs and technological advancements.

## **Hypothesis Development**

### ***The Importance of strategic management***

Enterprises are facing previously unheard-of opportunities and problems in the dynamic digital economy, which calls for a constant development of management strategies (Almunawar et al., 2022). The transition from traditional process management to strategic management, which represents a fundamental shift in how businesses navigate their competitive contexts, is a reflection of this paradigm shift (Fan et al., 2016). According to Fan et al. (2016), strategic management involves moving away from operational techniques that are internally centered and toward strategies that are externally focused, emphasizing value creation and market responsiveness over mere market presence. Furthermore, there is an increasing focus on cultural management, where corporate identity and strategic activities are driven by organizational culture (Fan et al., 2016).

Anticipating and capitalizing on future business possibilities is a critical function of strategic management, guaranteeing that businesses can sustain their proactive positions in competitive marketplaces over an extended period (Grant, 2021). According to Grant (2021), strategic planning plays a crucial role in enabling businesses to not only respond to changing market conditions but also to actively shape them. This allows them to gain a competitive advantage in dynamic industry landscapes. Businesses operating in China's manufacturing industry need

to take a proactive approach because of the swift changes in global markets and technology, which call for innovative and flexible approaches (Almunawar et al., 2022).

The hierarchical structure of corporate strategy frameworks is emphasized by the theoretical foundations of strategic management (Jiao, 2020). Jiao divides corporate strategy into three different levels: functional strategy, corporate strategy, and strategic management. Each level is important for developing, putting into practice, and assessing business strategies (Jiao, 2020). The pragmatic implementation highlights that although corporate and business plans offer broad guidance, functional strategies play a crucial role in coordinating internal resources like R&D, marketing, and production to accomplish strategic goals (Zoppelletto, 2023). The alignment highlights the significance of using integrated digital management methods to enable smooth departmental communication and ultimately improve the overall effectiveness and flexibility of organizations (Zoppelletto, 2023).

According to Daft, in order to promote efficient communication and decision-making across organizational hierarchies, effective management requires a diverse skill set that includes both technical skills and basic knowledge (Daft, 2021). This claim is consistent with modern theories of strategic management, which highlight management science and data-driven decision-making as essential instruments for improving operational effectiveness and strategy alignment (Daft, 2021).

Strategic management techniques in businesses have further changed as a result of the integration of artificial intelligence (AI) technology and advanced information systems (Dumas et al., 2018; Ahmad et al., 2022). Enterprises may efficiently handle complicated business data with AI-driven insights and data analysis, which promotes operational management and wise decision-making across a range of business operations (Ahmad et al., 2022). This technological integration underscores the transformative potential of strategic management in enhancing enterprise agility and competitive advantage in the digital age (Hsu & Wang, 2012).

Conclusively, strategic management continues to be the cornerstone of contemporary firm leadership, providing a methodical strategy to adeptly and strategically traverse intricate corporate contexts (Ginter et al., 2018). Enterprises in the Manufacturing of China can effectively address competitive challenges, sustain growth, and optimize performance outcomes in a rapidly evolving global marketplace by embracing digital innovations and mastering the evolutionary principles of strategic management (Haseeb et al., 2019).

### *Enterprises performance*

Since the 20th century, performance evaluation theory has undergone tremendous evolution, becoming an essential component of company management (Teece, 2014). Enterprise performance evaluation has evolved over time, primarily in foreign environments, and has shown unique traits at different phases of development (Batra et al., 2014). Enterprise management was synonymous with profit maximization when it was first organized under individual proprietorship and partnership models, and external evaluations primarily assessed solvency from the standpoint of creditors (Phi et al., 2019).

Due to the partial separation of ownership and management that resulted from the introduction of joint-stock corporations in the middle of the 19th century, investors were nevertheless compelled to demand transparency in business operations even though they were not involved in management (Johanson & Wiedersheim-Paul, 2017). This era marked the genesis of performance evaluations driven by external creditors and investors, focusing predominantly on balance sheet assets, liabilities, equity, and profitability metrics (Asah et al., 2015).

Financial models, value-based evaluations, and the Balanced Scorecard (BSC) approach are some examples of the specialized techniques in organizational performance evaluation that have developed throughout time. When evaluating financial models, experts look closely at



metrics like earnings per share, ROI, and net profit margins (Tudose et al., 2020). By standardizing capital inputs including tools, machinery, and materials, Taylor's Standard Cost System, which was first used in the late 1800s, influenced the early methods of financial evaluation (Fleischman & Parker, 2017).

Return on investment was emphasized as a key performance metric by Melnnes, which led the way in the 20th century in conducting thorough assessments for American multinational corporations (Holzer et al., 2019). According to Zhang et al. (2018), Person and Lezzig's survey highlighted internal rates of return, earnings per share, and sales profitability as critical measures of business health. By coordinating incentive programs with financial gains, Stern Stewart's invention of the Economic Value Added (EVA) paradigm in the 1990s transformed financial management techniques (Shah et al., 2014). Corporate valuation paradigms were reshaped by Jeffrey's Revised Economic Value Added (REVA), which placed even more emphasis on market value above book value (Zhong-hua & Xiao-feng, 2011).

With its integration of financial measurements with customer orientation, internal company processes, and learning and growth perspectives, the Balanced Scorecard (BSC) has become a key evaluation methodology (Quesado et al., 2018; Song, 2022). This all-encompassing method fosters thorough evaluations of business efficacy by measuring financial results as well as strategic objectives and operational performance alignment.

In conclusion, firm performance assessment in China's manufacturing industry has progressed from straightforward profit measures to intricate, multifaceted frameworks that take into account goals for sustainable growth, financial prudence, and strategic alignment. These approaches help businesses navigate complicated market dynamics and gain a sustainable competitive edge. They also act as vital instruments for strategic management, serving as benchmarks for organizational effectiveness.

### **Hypothesis development process**

In order to sustain their competitive advantage and ensure continued growth and progress, businesses in today's intensely competitive market environment need to apply scientifically grounded strategic management strategies (Hitt et al., 2009). Pogodina et al. (2020) assert that strategic management is critical to a company's ability to grow steadily over time as well as to maintain and increase its competitive advantage in dynamic markets. According to Hill (2022), strategic management is a comprehensive process that involves firms evaluating both internal and external environmental factors, developing long- and medium-term development plans, and closely monitoring the implementation of those plans in order to ensure continued growth and competitiveness. As a result, the researcher identified the following as the first hypothesis.

**H1: Strategic Management has a positive significant relationship with enterprises performance in the Chinese Manufacturing.**

The integration of digital management practices into strategic frameworks can yield substantial benefits for businesses, particularly in relation to improved operational efficiency and better resource allocation (Gupta et al., 2023). Digital management reduces the cost of manual processes and enhances revenue-generating potential through streamlined procedures and enhanced operational transparency. It also enables fast information transmission and processing (Gupta et al., 2023). By using digital management systems, businesses can significantly improve production processes, automate workflows, and raise overall production efficiency (Parida et al., 2019). The second hypothesis was then worked out.

**H2: Digital Management has a positive significant relationship with enterprises performance in the Chinese Manufacturing.**

Additionally, digital management supports strategic decision-making processes by enabling firms to take use of advanced data analysis and forecasting skills by providing greater insights into market demands and trends (Kolyasnikov & Kelchevskaya, 2020). The vast volumes of complex data required for environmental analysis and corporate strategic capability evaluation within the scope of strategic management can be collected and processed with the use of digital tools (Sturgeon, 2021). This ability increases the precision and effectiveness of strategic decisions, enabling companies to swiftly adapt to shifting market dynamics and grasp new opportunities. Thus, the third conjecture was put forth.

**H3: Digital Management has a positive significant relationship with enterprises performance of strategic management in the Chinese Manufacturing.**

To summarize, the aforementioned assumptions suggest that the implementation of strategic management approaches is essential for attaining better performance results in China's manufacturing industry. In addition, the incorporation of digital management capabilities into strategic frameworks improves resource allocation, operational efficiencies, and decision-making abilities, all of which contribute to improved organizational performance. Together, these theories highlight the vital role that integrated strategic and digital management plays in promoting long-term growth and competitiveness in China's manufacturing sector, which is a dynamic and complex industry.

## Methods

### *The conceptual of framework*

To gain a competitive edge, developing development plans and putting strategies into action are all included in the process of strategic management. Strategic management and an organization's performance are mediated by digital management. It entails using automation, data analysis, and digital technology to improve decision-making and operational efficiency. China's manufacturing sector performance is measured by a number of metrics, including profitability, productivity, market share, and growth rate. It displays the potency of digital and strategic management techniques.

### *Pathways and relationships*

Path 1 (Direct Relationship): Enterprise Performance ⇔ Strategic Management. Strategic management, by means of efficient planning, resource distribution, and market positioning, directly impacts the performance results of organizations.

Path 2 (Mediated Relationship): Enterprise Performance ➡ Digital Management. Strategic Management. Through digital management, strategic management has an indirect impact on an organization's success. Digital tools boost performance by improving decision-making, operational efficiencies, and transparency.

Path 3 (Direct Relationship): Enterprise Performance → Digital Management. The performance of businesses is directly impacted by digital management, which streamlines procedures, lowers expenses, and uses data-driven insights to inform strategic decision-making. Integration and Impact: Improving competitiveness and attaining sustainable growth in China's manufacturing sector require the integration of strategic and digital management. It lets businesses take advantage of opportunities, adjust to changing market conditions, and successfully manage risks. This chart below provides a clear overview of how strategic and digital management practices interact to influence enterprises performance in the context of China's manufacturing sector.

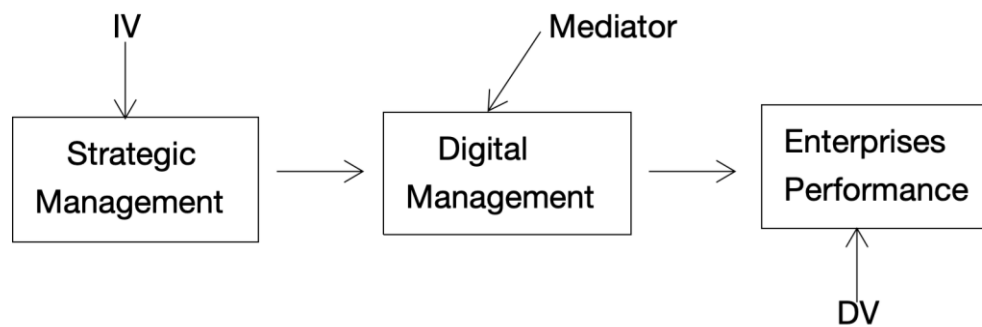


Figure 1: Conceptual Framework: The Relationship between organizational atmosphere, employee engagement and organizational support.

Source: Author

In summary, the inter-dependencies between digital management, strategic management, and enterprise performance are graphically represented by this conceptual framework. It emphasizes the strategic significance of integrated management approaches in accomplishing organizational goals and acts as a fundamental model for empirical research to validate and further explore these links.

#### ***Data source and sample selection***

The research object for this paper's empirical test is China's A-share listed manufacturing businesses from 2016 to 2022. The Eastern Money database (EM) provides the pertinent data. This work additionally processed the data by deleting the samples that lacked the primary factors in order to increase the quality of the data. 4,628 "enterprise-year" observations were obtained as a result.

#### ***Variable definition and measurements***

**Independent Variable: Strategic Management (SM)**

The three main metrics used to assess an organization's strategic management proficiency are sales, operating, and management efficiency. These include the total asset turnover, which gauges an organization's operating efficiency, the main business income to sales expense ratio, which gauges an organization's marketing efficiency, and the ratio of main business income to management expense, which gauges an organization's management efficiency. Furthermore, this paper utilizes the correlation matrix weighting method to apply specific weights to each indication, drawing on the work of Li Wenxin et al. (2022) to determine the weights of the three indicators. The final weights of the three indicators are determined using the aforesaid procedure, and they are 0.4061, 0.3419, 0.2608.

Enterprise Performance is the dependent variable (P). In order to quantify the performance of the businesses, this article uses the financial indicator return on total assets. For the subsequent robustness test, return on equity and earnings per share are used as substitute performance measurement indicators.

**Mediating Variables: Digital Management (DM)**

The digital transformation in this paper will be measured by the degree of digital transformation of enterprises in the digital economy section of Oriental Wealth database.

**Exogenous Variables**

This work introduces a number of exogenous variables that may affect enterprise performance in order to minimize the bias induced by missing variables. These variables include enterprise



size, which is represented by the logarithm of total assets; the ratio of total liabilities to total assets, or asset-liability ratio; growth as measured by the pace of increase in sales income; the enterprise's age and the number of years it has been in existence; Board size is represented as the logarithm of the total number of directors; share ownership concentration (Top10) is stated as the percentage of the top 10 shareholders;

### **Model setting**

#### **Main Effect Test Model**

In order to test the impact of strategic management on the performance of manufacturing enterprises, this paper constructs the following model (a) for testing:

$$Performance_{et} = y_0 + y_1 SM_{et} + \sum y_2 exogenous_{et} + \sum age + \sum manufactures_{et} + u_{et} \quad (a)$$

The exogenous variables are the ones listed above, the age indicates the fixed effect of time, the enterprise is represented by subscript e, the year is represented by subscript t, the performance is the enterprise performance of enterprise e in year t, and the strategic management level of enterprise e in year t. Manufacturers is a word for the random disturbance and the industry fixed effect.

### **Adjustment effect test model**

This study builds the moderating effect test model (b) by centralizing the independent and moderating variables, respectively, and adding the moderating variable digital management (DM) based on the main effect test model (a). This allows for the testing of the moderating effect of digital transformation. The moderating effect test model was first proposed by Wen Zhonglin et al. (2005).

$$Performance_{et} = y_0 + y_1 SM_{et} + y_2 DM_{et} + y_3 SM_{et} \times DM_{et} + \sum y_4 exogenous_{et} + \sum age + \sum manufactures_{et} + u_{et} \quad (b)$$

### **Findings**

Based on the results, the process of implementing an approach shows that strategic management greatly improves enterprise performance. In addition, adding a number of exogenous variables can improve enterprise performance at the strategy level—as long as other parameters stay the same. illustrating how digital transformation favorably regulates the link between strategic management and company performance.

### **Discussion and Conclusion**

#### **Regression result analysis:**

The regression findings for this paper are displayed in Table 1. According to column (1), the coefficient of strategic management (SM) is 0.023 and significant at the 1% level after adjusting simply for time and the effect of manufacturing. This suggests that SM significantly improves company performance. Moreover, the regression coefficient of strategic management

considerably reduces to 0.019, which is still very significant, when a number of exogenous variables are introduced to column (2). The absorption of the associated unmeasurable impacts of firm performance following the inclusion of several control variables may be the cause of the coefficient's reduction. The aforementioned findings collectively demonstrate that, provided all other factors remain constant.

This research develops model (b) to examine the moderating impact of digital management (DM) on the link between enterprise strategic management level and enterprise performance. Table 1's column (3) displays the correlation regression's findings below.

Table 1 Regression Result, Source: Author

Variables	Performance (1)	Performance (2)	Performance (3)
SM	0.023 (12.612)	0.019 (12.896)	0.017 (8.974)
DM			0.005 (-1.701)
SM×DM			0.002 (1.896)
Exogenous Variable	Yes	Yes	Yes
Intercept Term	(9.001-0.043)	0.256 (9.616)	0.247 (-8.912)
Time Effect	Yes	Yes	Yes
Industry Effect	Yes	Yes	Yes
Adjust R2	0.081	0.432	0.421

At the 1% level, it is evident that there is a substantial positive correlation between the company performance and strategic management level. Additionally, at the 5% significance level, the cross-multiplication term ( $MI \times DT$ ) coefficient between digital management and strategic management is considerably positive, suggesting that digital transformation positively controls the relationship between enterprise performance and strategic management. As a result, this paper's second and third hypotheses have been confirmed.

### ***Theoretical Implication***

In order to investigate the moderating effect of digital management (DM) on the relationship between enterprise strategic management level and enterprise performance, this study builds model (b). The results of the correlation regression are shown in Table 1's column (3). The performance of the organization and the degree of strategic management are clearly positively correlated, even at the 1% level. Furthermore, the cross-multiplication term ( $MI \times DT$ ) coefficient between digital management and strategic management is significantly positive at the 5% significance level, indicating that the relationship between enterprise performance and strategic management is positively controlled by digital transformation. Consequently, the two and three assumptions of this study have been verified.

The theoretical model presented in this study advocates for the integration of digital management and calls for a reevaluation of traditional ideas of strategic management in order

to improve organizational performance. This study broadens the geographic emphasis of studies on strategic management by contributing empirical data from the Chinese manufacturing sector to the body of literature. The results highlight the revolutionary potential of digital management in global competitive arenas and the application of theories of strategic management in many economic circumstances. Future research on industry-specific digital management techniques and how they impact the effectiveness of strategic management across different industries and regions can build upon this theoretical framework.

### ***Practical and Social Implications***

This study examines the internal relationships between enterprise performance, digital management, and strategic management using research samples from China's A-share manufacturing listed businesses from 2015 to 2020. It also provides additional clarification on digital transformation. Relevant findings about the connection between company performance and strategic management have been drawn. These are the principal ones: (2) Digital management can significantly promote the improvement of strategic management level on enterprise performance; that is, the higher the degree of digital management, the more significant the promotion of strategic management level on enterprise performance. (1) The level of strategic management plays a significant role in promoting firm performance. In particular, from the two perspectives of increasing efficiency and effectiveness, digital management primarily boosts the improvement of strategic management level on organizational performance and benefit of strategic management.

This paper's research result offers some more insights for manufacturing companies. The enhancement of strategic management should be the first priority for enterprise management. While technical innovation can yield immediate economic benefits for businesses, sustained competitive advantage requires strategic management. Thus, in order to enhance their capacity to manage innovation, businesses should quicken the pace of strategic management: In order to support the long-term development of businesses through strategic management, one should actively study the cutting-edge management concepts and practices of other nations. On the other hand, one should investigate the management mode appropriate for the characteristics of enterprises and continuously explore more novel management modes and methods, taking into account China's unique national conditions.

Secondly, we ought to grasp the momentous chance presented by the growth of the digital economy and vigorously encourage the enterprise digital management process. The ability to substantially advance corporate strategic management and, eventually, improve enterprise performance increases with the level of digital management. In order to rebuild the value chain of their business and achieve the digitalization of various links from R&D to production to sales to the final service, enterprises should actively learn from the advanced experience of successful enterprises in digital management and apply emerging digital technologies. Additionally, create a digital management system that is appropriate for the entire product life cycle in order to boost management effectiveness and, eventually, bring about improvements of enterprise performance.

The spatial impact of digital management on manufacturing resilience is empirically tested in this research. Though the impact of the digital economy on manufacturing toughness varies depending on the region, type of enterprise, or enterprise type, this impact has not been fully examined in this paper. Future research can further examine the heterogeneity of this impact with respect to enterprises and regions.

***Limitations of the Study***

The report only looks at China's manufacturing industry. Although the research offers insightful information on this particular setting, it's possible that the conclusions won't apply to other industries or areas. China's distinct economic, cultural, and legal landscape may have a different impact on the dynamics of digital and strategic management than it does on other nations. A cross-sectional design is used in this study to collect data at a specific moment in time. Although helpful in establishing connections, it restricts the capacity to determine causality and comprehend the long-term effects of digital and strategic management on business success. Measurement constraints: Digital and strategic management factors are intricate and multidimensional.

The study might not have included all of these constructions' characteristics, and the assessments might not have accurately captured the nuances of how these techniques are applied and viewed inside businesses. Self-Reported Information: The reliability of the results could be impacted by biases such social desirability bias or subjective interpretation of strategic and digital management techniques if self-reported data from corporate managers and executives is used.

**Suggestions for Future Research**

**Longitudinal Studies:** In order to better understand the relationships between digital and strategic management and organizational performance over the long term, longitudinal study designs should be considered in future research. By monitoring these factors over time, a deeper knowledge of their dynamic interaction and influence can be obtained. **Comparative Studies:** Improving the study's generalizability can be achieved by expanding its scope to include more industries and geographic regions. Comparative studies across industries or countries might identify industry- or region-specific factors influencing the efficacy of digital and strategic management approaches.

**Exploring Further Mediators and Moderators:** Although this study emphasizes digital management as a mediating variable, future research could explore other potential mediators and moderators, such as organizational culture, leadership styles, or technological readiness, in order to provide a more comprehensive understanding of the factors influencing enterprise performance. By addressing these shortcomings and following the recommendations for future research, scholars can expand on the groundwork this study laid and increase our understanding of the impact of strategic and digital management on enterprise performance, particularly in the manufacturing sector.

**References**

- Al-Digs, A. (2021). Models and methods for power system online dynamic contingency monitoring and control (Doctoral dissertation, University of British Columbia).
- Andreeva, T., & Kianto, A. (2012). Does knowledge management really matter? Linking knowledge management practices, competitiveness and economic performance. *Journal of Knowledge Management*, 16(4), 617-636.
- Asah, F., Fatoki, O. O., & Rungani, E. (2015). The impact of motivations, personal values and management skills on the performance of SMEs in South Africa. *African Journal of Economic and Management Studies*, 6(3), 308-322.
- Barykin, S. Y., Bochkarev, A. A., Dobronravin, E., & Sergeev, S. M. (2021). The place and role of digital twin in supply chain management. *Academy of Strategic Management Journal*, 20, 1-19.

- Batra, R., Ramaswamy, V., Alden, D. L., Steenkamp, J. B. E., & Ramachander, S. (2014). Effects of brand local and nonlocal origin on consumer attitudes in developing countries. In *Cultural psychology* (pp. 83-96). Psychology Press.
- Bazoobandi, S. (2015). Sanctions and isolation, the driving force of Sino-Iranian relations. *East Asia*, 32(3), 257-271.
- Chen, S., & Guo, Q. (2023). Fintech, strategic incentives and investment to human capital and MSEs innovation—Empirical evidence from China. *The North American Journal of Economics and Finance*, 101963.
- Corsi, V. (2018). Green energy transition: The case study on China.
- David, F. R., & David, F. R. (2016). *Strategic Management: A Competitive Advantage Approach, Concepts and Cases*. Pearson.
- Dong, X., Yan, M., & Hu, Y. (2023). Management transformation and system building in line with international standards. In *Huawei: From catching up to leading* (pp. 165-199). Singapore: Springer Nature Singapore.
- Efrat, K., Hughes, P., Nemkova, E., Souchon, A. L., & Sy-Changco, J. (2018). Leveraging of dynamic export capabilities for competitive advantage and performance consequences: Evidence from China. *Journal of Business Research*, 84, 114-124.
- Eriksen, T. H. (2020). *Globalization: The key concepts*. Routledge.
- Fleischman, R. K., & Parker, L. D. (2017). What is past is prologue: Cost accounting in the British industrial revolution, 1760-1850 (Vol. 6). Routledge.
- Garrett, G. (2010). G2 in G20: China, the United States and the world after the global financial crisis. *Global Policy*, 1(1), 29-39.
- Grinin, L., Grinin, A., & Malkov, S. (2023). Economics: Optimizing growth. In *Reconsidering the limits to growth: A report to the Russian association of the club of Rome* (pp. 155-168). Cham: Springer International Publishing.
- Guo, Q., & You, W. (2023). A comprehensive evaluation of the international competitiveness of strategic minerals in China, Australia, Russia and India: The case of rare earths. *Resources Policy*, 85, 103821.
- Harmon, P. (2019). *Business process change: A business process management guide for managers and process professionals*. Morgan Kaufmann.
- Hill, C. W., Schilling, M. A., & Jones, G. R. (2020). *Strategic Management: Theory & Cases: An Integrated Approach*. Cengage Learning.
- Holzer, H. P., & Schoenfeld, H. M. (Eds.). (2019). *Managerial accounting and analysis in multinational enterprises*. Walter de Gruyter GmbH & Co KG.
- Huang, X., Yu, P., Song, X., & Chen, H. (2022). Strategic focus study on the new development pattern of 'dual circulation' in China under the impact of COVID-19. *Transnational Corporations Review*, 14(2), 169-177.
- Hughes, M., Martin, S. L., Morgan, R. E., & Robson, M. J. (2010). Realizing product-market advantage in high-technology international new ventures: The mediating role of ambidextrous innovation. *Journal of International Marketing*, 1-21.
- Johanson, J., & Wiedersheim-Paul, F. (2017). The internationalization of the firm—four Swedish cases. In *International business* (pp. 127-144). Routledge.
- Kerin, M., & Pham, D. T. (2019). A review of emerging Industry 4.0 technologies in remanufacturing. *Journal of Cleaner Production*, 237, 117805.
- Kline, R. R. (2015). *The cybernetics moment: Or why we call our age the information age*. JHU Press.
- Ma, S., Ding, W., Liu, Y., Ren, S., & Yang, H. (2022). Digital twin and big data-driven sustainable smart manufacturing based on information management systems for energy-intensive industries. *Applied Energy*, 326, 119986.



- Ma, X., & Chen, R. (2021). Industrial internet development strategies and innovative practices for large energy corporation. In IOP Conference Series: Earth and Environmental Science (Vol. 632, No. 3, p. 032002). IOP Publishing.
- MacBean, A. (2012). Export instability and economic development. Routledge.
- Malizia, E., Feser, E. J., Renski, H., & Drucker, J. (2020). Understanding local economic development. Routledge.
- Müller Miñana, S. (2017). The role of trade fairs and exhibitions in the German economy.
- Munirathinam, S. (2020). Industry 4.0: Industrial internet of things (IIOT). In Advances in computers (Vol. 117, No. 1, pp. 129-164). Elsevier.
- Nyagadza, B. (2021). Fourth industrial revolution. Management Education and Automation, 3, 29.
- Phi, N. T. M., Taghizadeh-Hesary, F., Chuc, A. T., Yoshino, N., & Kim, C. J. (2019). Performance differential between private and state-owned enterprises: An analysis of profitability and leverage.
- Pisano, G. P., & Shih, W. C. (2012). Producing prosperity: Why America needs a manufacturing renaissance. Harvard Business Press.
- Rodrik, D. (2018). New technologies, global value chains, and developing economies (No. w25164). National Bureau of Economic Research.
- Shah, R. B., Haldar, A., & Nageswara Rao, S. V. D. (2014). Economic value added: A financial flexibility tool. Corporate Ownership and Control, 1727-9232.
- Siebel, T. M. (2019). Digital transformation: Survive and thrive in an era of mass extinction. RosettaBooks.
- Sorbino, L. (2020). Made in China 2025.
- Souza, M. L. H., da Costa, C. A., de Oliveira Ramos, G., & da Rosa Righi, R. (2020). A survey on decision-making based on system reliability in the context of Industry 4.0. Journal of Manufacturing Systems, 56, 133-156.
- Tang, S., & Wang, S. (2021). Revelation: State capacity and economic development. In China's rise and its global implications (pp. 15-64).
- Teece, D. J. (2014). The foundations of enterprise performance: Dynamic and ordinary capabilities in an (economic) theory of firms. Academy of Management Perspectives, 28(4), 328-352.
- Tudose, M. B., Rusu, V. D., & Avasilcai, S. (2022). Financial performance—determinants and interdependencies between measurement indicators. Business, Management and Economics Engineering, 20(1), 119-138.
- Vaidya, S., Ambad, P., & Bhosle, S. (2018). Industry 4.0—a glimpse. Procedia Manufacturing, 20, 233-238.
- Wong, L. W., Tan, G. W. H., Ooi, K. B., Lin, B., & Dwivedi, Y. K. (2022). Artificial intelligence-driven risk management for enhancing supply chain agility: A deep-learning-based dual-stage PLS-SEM-ANN analysis. International Journal of Production Research, 1-21.
- Yildiz, E., Møller, C., & Bilberg, A. (2021). Demonstration and evaluation of a digital twin-based virtual factory. The International Journal of Advanced Manufacturing Technology, 114(1-2), 185-203.
- Zhang, H., Hu, M., & Zhang, H. (2018, September). The analysis on financial performance of the industrial chain and spatial effect for China's new energy automobile. In 2018 7th International Conference on Energy and Environmental Protection (ICEEP 2018) (pp. 1249-1259). Atlantis Press.