

The Impact of Digital Finance on the High-Quality Development of Small and Medium-Sized Enterprises

Zhibo Zhang*

School of Economics and Management, Shenyang University of Chemical Technology, Shenyang 110142, China

**Corresponding author: Zhibo Zhang.*

Abstract

This study aims to explore the impact of digital finance on the high-quality development of small and medium-sized enterprises (SMEs) in county-level regions. By analyzing the components of digital finance, such as mobile payments, lending platforms, blockchain, and digital assets, the study evaluates their effects on corporate financing behavior and productivity improvement. Combining case study and data analysis methods, this research reveals the role of digital finance in supporting enterprise innovation and green sustainable development. The results show that digital finance significantly improves the financing environment for SMEs, enhances their technological innovation capabilities, and promotes green transformation. The findings provide important reference value for policymakers and enterprise managers.

Keywords

digital finance, small and medium-sized enterprises, high-quality development, financing behavior, green transformation

1. Introduction

With the continuous advancement of digital technology, digital finance has become a key driving force for economic development. In recent years, digital finance has broadened funding sources and improved the efficiency of capital utilization for small and medium-sized enterprises through information-based credit enhancement, cost reduction, risk sharing, and factor optimization [1]. Against this backdrop, the establishment of digital economy innovation and development pilot zones has injected new momentum into enterprises and accelerated the enhancement of new quality productive forces [2].

County-level small and medium-sized enterprises occupy an important position in the national economy. However, their traditional financing channels often face numerous constraints, such as high financing costs and information asymmetry. The emergence of digital finance offers new hope for these SMEs by effectively alleviating financing difficulties and promoting sustainable economic development [3]. Therefore, studying the specific impact of digital finance on county-level SMEs holds significant theoretical and practical importance. It helps provide decision-making references for policymakers, financial institutions, and enterprise managers.

This paper aims to explore how digital finance influences the financing behavior and outcomes of SMEs within the economic environment. By analyzing the comprehensive effects of digital finance on enterprises' new quality productive forces and financing costs, the study seeks to reveal its underlying mechanisms in supporting the high-quality development of county-level economies. This paper systematically examines the mechanisms through which digital finance affects the high-quality development of SMEs, enriching relevant theories on digital finance and enterprise development. It also provides references for SMEs to achieve high-quality development with the help of digital finance and offers a basis for policymakers to improve digital finance regulation.

2. Specific Components of Digital Finance

This paper examines in detail the roles of information-based credit enhancement and financing cost reduction in the impact of digital finance on SMEs. Digital finance refers to a model that utilizes digital technology to provide financial services such as payments, credit, risk control, and investment. It mainly includes mobile payments, online lending, big data credit reporting, blockchain finance, and other forms.

Mobile payment is gradually becoming a core component of the digital finance system. By providing convenient and efficient payment methods, mobile payment enables rapid transactions between consumers and enterprises [4]. This payment method not only improves payment efficiency but also effectively reduces payment costs. Its widespread application across various online platforms has significantly enhanced the liquidity of overall economic activities. Similarly, the rise of lending platforms cannot be overlooked. Compared with traditional lending methods, these platforms demonstrate clear competitive advantages through their convenience and flexibility, particularly in meeting enterprises' short-term capital turnover needs. Data show that in 2024, the total loans issued by major financial institutions exceeded 110 trillion yuan, an increase of nearly 8 trillion yuan year-on-year [5]. These figures clearly demonstrate the important position occupied by lending platforms in the broader financial market.

Blockchain and digital assets are increasingly integrating into the financial ecosystem. Blockchain technology, with its decentralized nature and transparency, significantly enhances the security and efficiency of financial transactions. When linked to SMEs, blockchain technology's decentralization, traceability, transparency, and security can strengthen the authenticity of supply chain information and improve the accessibility of financing for small and medium-sized enterprises.

Digital assets, such as cryptocurrencies, are not only used as investment tools but are also gradually being widely applied in the payment field. The deep integration of blockchain technology and digital assets is accelerating the pace of financial innovation and is gradually exerting a profound influence on the development of financial markets.

3. The Specific Impact of Digital Finance on Small and Medium-Sized Enterprises

In the context of the digital economy, the digital transformation of enterprises is gradually demonstrating its significant influence on economic benefits and efficiency. By acquiring external innovation resources, enterprises can achieve open and networked innovation. This process not only drives innovation in enterprise organizational management but also significantly improves the level of human resources, thereby increasing enterprises' innovation potential. Through these mechanisms, enterprises accelerate the pace of technological innovation, providing strong support and sustained momentum for the high-quality development of the national economy. These mechanisms and pathways collectively demonstrate the remarkable role of the digital economy in enhancing economic benefits and efficiency [6].

In terms of financing constraints, the application of financial technology shows significant advantages. Through precise evaluation using big data and artificial intelligence, enterprises' credit analysis and loan approval processes are optimized, greatly reducing the cost of information verification between banks and enterprises. Researchers such as Wen Jiahao and others have used comprehensive indicators such as the investment-cash flow sensitivity model, KZ index, and WW index to quantify the degree of enterprises' financing constraints. It can thus be seen that digital finance demonstrates its unique effectiveness in alleviating the financing difficulties of small and medium-sized enterprises [7].

Digital finance provides stable funding support for enterprises' R&D investment and promotes the transformation of technological innovation achievements into new quality productive forces. The ultimate goal of technological innovation is to truly transform innovation outcomes into actual productive forces. The optimized allocation of financial resources is the key to solving the greater financing challenges faced by SMEs and helps them maintain a favorable position in competition [8, 9]. In addition, digital finance improves the resilience of SME supply chains through various means, including enhancing capital liquidity, improving risk management capabilities, promoting supply chain transparency, and increasing cooperation efficiency.

By reducing financing costs, digital finance decreases offline branch and labor costs and lowers risk premiums, enabling SMEs to obtain credit funds at lower interest rates. SMEs can achieve higher efficiency in capital and information acquisition through convenient financing channels and digital platforms. This greatly reduces operating costs and improves responsiveness to market fluctuations, thereby effectively enhancing the stability and flexibility of supply chains.

In terms of green sustainable development, for example, digital finance provides green credit, green insurance, and other products to support investment in environmental protection technologies and assist SMEs in green transformation [10]. Digital finance offers convenient financing channels and innovative financial products that support enterprises in investing in environmentally friendly technologies and sustainable projects. This effectively lowers the threshold for enterprises to enter the green sector. Through data analysis, digital finance helps enterprises optimize resource utilization and energy efficiency management, promoting more environmentally friendly operational methods. The introduction of real-time monitoring and reporting systems improves transparency, making it easier for enterprises to meet environmental compliance requirements and thus driving overall green transformation. In this way, SMEs can better address environmental challenges and achieve their sustainable development goals [10].

4. Challenges and Obstacles

Small and medium-sized enterprises face multiple challenges when striving to adopt digital finance to support their green sustainable development plans. The primary challenge is technological adaptability and the construction of digital infrastructure. Due to resource constraints, many SMEs find it difficult to adequately build the digital infrastructure required to support advanced financial technology applications. County-level and small and micro enterprises lack complete networks, data platforms, and other infrastructure, which restricts the implementation of digital financial services. Existing research has pointed out that such resource limitations directly affect enterprises' performance and participation on digital finance platforms.

Second, security and privacy protection issues also constitute a major challenge. Digital finance involves a large amount of operational, transaction, and financial data, with prominent risks of cyberattacks and information leakage. SMEs generally have weak security protection capabilities. The operation of digital finance involves a large volume of sensitive data, whose transmission and storage require highly secure measures to prevent information leakage and cyberattacks. As network threats become increasingly complex, digital finance regulatory rules are still being improved, and rules in some areas remain unclear, affecting the enthusiasm of financial institutions to provide services. SMEs urgently need more technical support to ensure the security of their data.

Policy and regulatory constraints also complicate the implementation of digital finance. In some countries, the regulatory framework has not yet been fully developed, leading to various restrictions that enterprises may face when using digital finance tools, thereby affecting the smooth advancement of their green sustainable development plans [11].

5. Policy Recommendations and Future Research

In order for SMEs to more effectively utilize digital finance and promote green sustainable development, the optimization of relevant policies is particularly important. First, strengthening data integration and sharing mechanisms can significantly improve the operational efficiency of digital finance. By establishing data-sharing platforms among SMEs, relevant functional departments can coordinate more effectively,

thereby promoting the development of digital finance applications. Second, strengthening governance of digital finance is another key aspect of policy optimization. By formulating more comprehensive supervision and management rules, the security and legality of financial technology can be ensured, thereby giving enterprises greater confidence when making green investments.

At the government level, efforts should be accelerated to build digital infrastructure in county-level regions, improve digital finance regulatory rules, and establish a unified enterprise credit information platform. At the financial institution level, differentiated credit products should be innovated, approval processes simplified, data security protection strengthened, and service thresholds lowered. At the enterprise level, SMEs should accelerate digital transformation, standardize financial data, improve credit levels, and make rational use of digital finance tools.

Future research directions should further explore the long-term impact of digital finance on the innovation capabilities and sustainable development of SMEs. These studies can focus on how to more widely apply digital finance tools to effectively enhance enterprises' innovation capabilities and environmental responsibility. Only through a deeper understanding of the role digital finance plays in different economic environments and stages of enterprise development can comprehensive green transformation be promoted and the grand goal of sustainable development be achieved. With the support of the above recommendations and future research directions, SMEs will be better equipped to address the challenges brought by digital finance applications and move toward a more sustainable future.

References

- [1] Han, X. T. (2026). Digital finance helps county-level small and medium-sized enterprises with financing. *Contemporary County Economy*, (03), 112-114. <https://doi.org/10.16625/j.cnki.51-1752/f.2026.03.037>.
- [2] Sun, L. P. (2026). Research on the impact of digital economy innovation and development pilot zones on enterprises' new quality productive forces. *Management Modernization*, 46(01), 158-167. <https://doi.org/10.19634/j.cnki.11-1403/c.2026.01.016>.
- [3] Li, Y. F., Zhou, B., & Zhang, G. (2026). Threshold effect and spatial spillover effect of digital finance on high-quality economic development. *Statistics and Decision*, 42(04), 141-147. <https://doi.org/10.13546/j.cnki.tjyjc.2026.04.023>.
- [4] Lu, Q. J., Luo, J. Y., & Li, X. (2026). The impact of digital currency and mobile payment on China's money supply and seigniorage. *New Finance*, (02), 11-23.
- [5] Lan, R. J. (2026). Unlocking the "borrow-to-repay" code of financial technology lending platforms: Differences in borrowing behavior and regulatory insights. *Nankai Business Review*. Advance online publication. <https://link.cnki.net/urlid/12.1288.F.20250818.1703.010>.
- [6] Li, Q. Q., & Sun, J. P. (2026). Hotspots and trend analysis of enterprise technological innovation research in the context of the digital economy. *Technology and Market*, 33(02), 145-150.
- [7] Wen, J. H., & Zhang, Q. D. (2026). Research on the effect of financial technology on financing constraints of agricultural small and medium-sized enterprises from the perspective of digital transformation. *Inner Mongolia Science and Technology and Economy*, (02), 52-59.
- [8] Chen, K. H., & Huang, Z. G. (2026). Digital inclusive finance, financing constraints, and enterprises' new quality productive forces. *Techno-Economics & Management Research*, (02), 75-82.
- [9] Wei, Y. J. (2026). Research on the impact of digital finance on enterprises' new quality productive forces. *Communication of Finance and Accounting*, (04), 90-94. <https://doi.org/10.16144/j.cnki.issn1002-8072.2026.04.028>.
- [10] Sun, Y., & Zhang, Y. L. (2026). Digital finance and enterprises' continuous green innovation: Facilitation or crowding-out? *Hubei Social Sciences*, (02), 85-98.

- [11] Zhang, G. Y. (2026). Research on the pathways for banks to promote high-quality financial development under the background of the “Five Major Articles”. *China Market*, (03), 45-48. <https://doi.org/10.13939/j.cnki.zgsc.2026.03.012>.

Funding

This research received no external funding.

Conflicts of Interest

The authors declare no conflict of interest.

Acknowledgment

This paper is an output of the science project.

Open Access

This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

