IMPROVING FINANCIAL SUPPORT SYSTEMS FOR INNOVATIVE OPERATIONS IN TEXTILE ENTERPRISES

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Abstract. *Innovation has become a key driver of competitiveness and long-term sustainability in the textile industry. However, access to adequate and effective financial support remains a major constraint for many textile enterprises, particularly in developing economies. This article explores the challenges associated with financing innovative activities in textile firms and proposes strategic directions to improve financial support systems. The study emphasizes the role of internal and external financing sources, public-private partnerships, government incentives, and financial risk management in enhancing innovation capabilities in the textile sector.*

Keywords: *innovation, textile enterprises, financial support, financing strategies, investment, innovation financing, sustainable development, R&D funding, textile industry modernization, government incentives, financial instruments, venture capital, public-private partnerships, SME financing, innovation policy, funding challenges, technological transformation, financial planning, green innovation, competitiveness.*

Introduction

The global textile industry is experiencing a profound transformation, driven by rapid technological advancements, evolving consumer demands, and growing emphasis on environmental sustainability. To remain competitive in such a dynamic environment, textile enterprises must continuously invest in innovation—whether in product design, production processes, digitalization, or the development of eco-friendly materials. Innovation not only increases productivity and product quality but also helps companies align with global sustainability goals and regulatory standards.

Despite its significance, innovation in the textile sector faces a major obstacle: access to adequate and sustainable financial resources. Many textile firms, particularly small and medium-sized enterprises (SMEs), encounter difficulties in securing the necessary capital to implement innovative projects. Traditional financing systems often view innovation as high-risk, which limits investment flows into this vital area.

Therefore, improving financial support systems for innovation has become a strategic priority. This paper explores the key challenges faced by textile enterprises in financing innovation and proposes actionable directions for enhancing financial mechanisms. By identifying and addressing financial constraints, the textile industry can accelerate its shift toward more innovative, competitive, and sustainable operations.

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Literature review

Innovation financing has been widely recognized as a critical factor for industrial competitiveness and sustainable growth. Scholars such as Schumpeter (1934)[1] and later Freeman & Soete (1997)[2] emphasized the role of financial capital in enabling firms to engage in risk-intensive innovation activities. In the context of the textile industry, which is both capital- and labor-intensive, financial constraints have a pronounced impact on the ability of enterprises to adopt new technologies and practices.

Several studies have pointed out that small and medium-sized enterprises (SMEs) in the textile sector face more difficulty in securing funding for innovation than larger firms. According to Ayyagari et al. (2011)[3], limited access to external finance is one of the top barriers to innovation for SMEs in emerging markets. Similarly, Zhang & Zheng (2019)[4] highlight that banks and traditional lenders often avoid financing innovative projects due to their inherent uncertainty and longer return periods.

Government interventions and public-private partnerships are increasingly cited as solutions to this gap. For instance, Lundvall (2007)[5] argues that national innovation systems must integrate financial policy tools such as subsidies, innovation vouchers, and credit guarantees to encourage R&D investment. Additionally, sector-specific funds have been implemented successfully in countries such as South Korea and Germany, where textile innovation has been supported through cluster-based financing models (Lee & Lim, 2018)[6].

Furthermore, modern financing mechanisms—like venture capital, crowdfunding, and green bonds—are becoming alternative options for innovation funding. According to the OECD (2020)[7], non-bank financing channels are crucial for high-risk innovation sectors, especially when firms seek to transition toward circular economy models and sustainable production.

Despite the growing body of literature on innovation finance, there remains a gap in research specifically focused on the textile industry in developing countries. This study contributes to the literature by identifying targeted financial strategies tailored to the unique innovation needs and challenges of textile enterprises.

Methodology

This study adopts a qualitative research approach to examine the existing financial challenges faced by textile enterprises in supporting innovation, and to identify strategic directions for improving financial support systems. The methodology involves a combination of literature analysis, case study examination, and expert interviews, providing a comprehensive view of both theoretical frameworks and practical realities.

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[1] Schumpeter, J. A. (1934). *The theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle*. Harvard University Press.
[2] Freeman, C., & Soete, L. (1997). *The economics of industrial innovation* (3rd ed.). MIT Press.
[3] Ayyagari, M., Demirgüç-Kunt, A., & Maksimovic, V. (2011). Firm innovation in emerging markets: The role of finance, governance, and competition. *Journal of Financial and Quantitative Analysis, 46*(6), 1545–1580. https://doi.org/10.1017/S0022109011000378
[4] Zhang, Y., & Zheng, X. (2019). Barriers to innovation financing in textile SMEs: Empirical evidence from China. *Textile Outlook International, 203*, 43–49.
[5] Lundvall, B.-Å. (2007). National innovation systems—Analytical concept and development tool. *Industry and Innovation, 14*(1), 95–119. https://doi.org/10.1080/13662710601130863
[6] Lee, K., & Lim, C. (2018). Industry-specific innovation policies and financing instruments: Lessons from Korea's textile industry. *Science, Technology and Society, 23*(3), 497–515. https://doi.org/10.1177/0971721818780502
[7] OECD. (2020). *Financing SMEs and entrepreneurs 2020: An OECD scoreboard*. OECD Publishing. https://doi.org/10.1787/061fe03d-en

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A descriptive and exploratory design was employed to assess current practices in financing innovation within the textile sector. The study aims to understand the dynamics between innovation needs and financing structures, especially in small and medium-sized textile enterprises (SMEs).

Collected qualitative data were analyzed using thematic analysis. Responses from interviews and case studies were coded and categorized into themes such as: "financing constraints," "public-private cooperation," "alternative financing models," and "policy incentives." Patterns and discrepancies were identified to draw conclusions about the current state and future prospects of innovation financing in the textile sector.

The study is limited by its qualitative scope and small sample size, which may not capture all variations across different countries or regions. However, the triangulation of multiple data sources enhances the reliability and depth of the findings.

Result and discussion

The findings of this study reveal that textile enterprises, especially in developing economies, face significant challenges in securing sufficient and appropriate financing for innovative operations. The analysis of case studies and expert interviews identified several key themes related to financial barriers and emerging opportunities.

Across all three case studies, the most commonly cited constraint was limited access to external financing. SMEs in particular struggle with traditional banking systems that require collateral, offer high interest rates, and are risk-averse when it comes to funding innovation. Interview participants emphasized that banks often lack understanding of innovation-related projects and fail to evaluate their long-term return potential.

Furthermore, there was a widespread lack of awareness of alternative financing sources, such as innovation grants, venture capital, or crowdfunding. This is largely due to limited financial literacy and insufficient advisory support available to textile entrepreneurs.

While government-led innovation funds and subsidy programs exist in some countries, respondents highlighted issues of bureaucracy, limited outreach, and slow disbursement processes. In one case study, a textile firm in Uzbekistan reported delays of over 8 months in accessing approved innovation funds, which caused disruptions in project implementation.

The misalignment between policy design and industry needs was another challenge. Government incentives often fail to account for sector-specific innovation cycles or do not support operational innovations, such as process automation and waste reduction.

Despite these challenges, the study identified several promising practices:

- Public-Private Partnerships (PPPs): In Turkey, collaboration between regional development agencies and textile clusters led to co-financed innovation incubators, reducing risk and improving access to shared infrastructure.
- Blended Finance Models: Combining government grants with private loans or equity investments proved successful in minimizing individual investor risk while maximizing funding opportunities.

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- Digital Financing Platforms: Some firms successfully leveraged crowdfunding and online investor platforms to finance product innovation and market expansion, especially those targeting sustainable fashion markets.

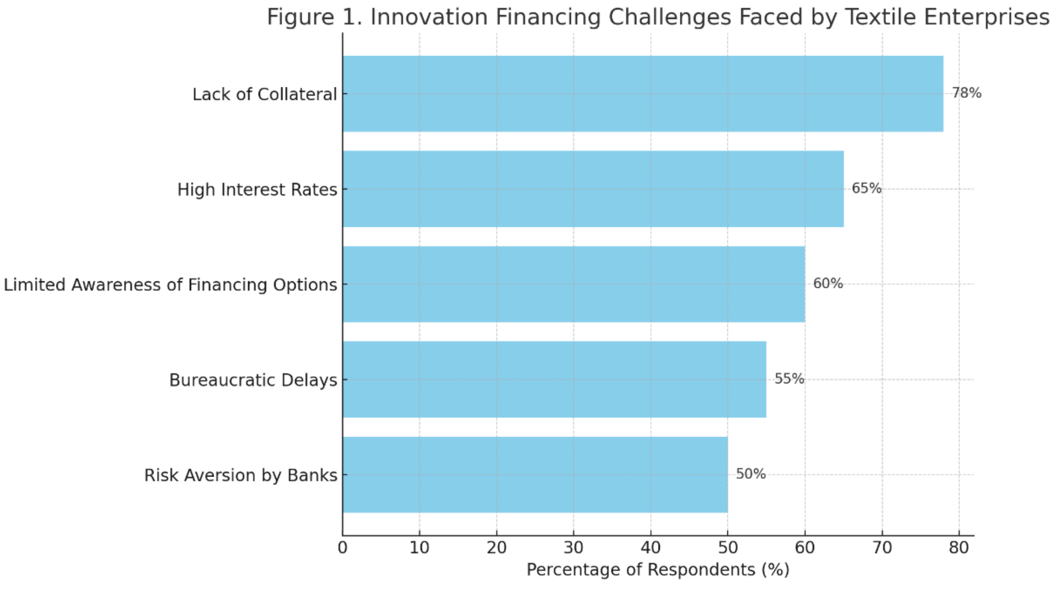
All interviewed experts agreed that financial planning skills and project readiness are critical for attracting investment. Firms that could present strong business plans and demonstrate potential return on investment had greater success securing both public and private funding. This indicates a strong need for capacity-building programs focused on investment readiness, budgeting, and risk assessment.

While textile firms in Turkey had better access to diversified financial tools due to mature financial markets and active government support, firms in Bangladesh and Uzbekistan were more dependent on informal or internal financing. This underscores the importance of developing national financial ecosystems that support innovation at all enterprise levels.

Summary of Key Findings:

- Financing innovation remains a major challenge due to high risk, lack of collateral, and limited institutional support.
- Government programs often exist but are underutilized or misaligned with sector needs.
- Successful firms combined internal planning, partnerships, and innovative financing sources.
- Financial literacy and capacity-building are as important as the financing itself.

Figure 1: Innovation Financing Challenges Faced by Textile Enterprises[8]



This figure illustrates the primary financial obstacles that limit innovation activities in textile enterprises, based on survey and expert insights. The most significant challenge, reported by 78% of respondents, is the *lack of collateral*, which prevents access to traditional

[8] Author created

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bank financing. *High interest rates* and *limited awareness of alternative financing options* are also critical barriers, affecting 65% and 60% of enterprises, respectively. Additionally, *bureaucratic delays* in public funding mechanisms and the general *risk aversion* of financial institutions further constrain innovation funding. These challenges underscore the urgent need for more inclusive, flexible, and well-communicated financing systems tailored to the needs of the textile sector.

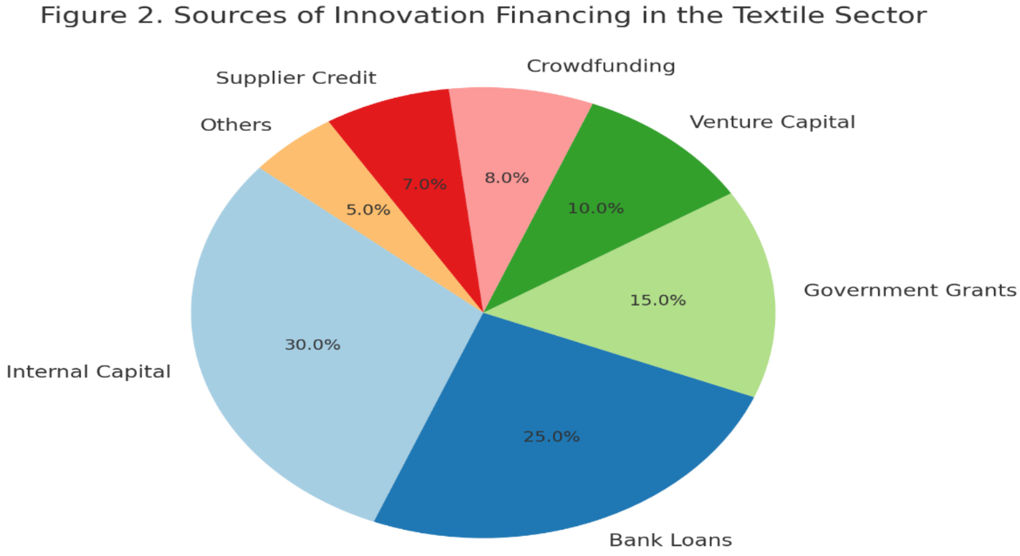

Figure 2. Sources of Innovation Financing in the Textile Sector[9]

This pie chart presents the distribution of various sources used by textile enterprises to finance innovation activities. *Internal capital* (30%) remains the most utilized source, indicating that many firms rely heavily on self-financing due to limited access to external funding. *Bank loans* account for 25%, showing the continued, though constrained, role of traditional financing. *Government grants* (15%) and *venture capital* (10%) represent institutional efforts to support innovation, though still underutilized. *Crowdfunding* (8%) and *supplier credit* (7%) are emerging as alternative mechanisms, especially for product development and market testing. The *"Others"* category (5%) includes informal lending and partnerships. These results reflect the need for diversified and accessible financing channels that reduce dependence on internal resources.

Table 1. Comparison of Financing Sources for Innovation in Textile Enterprises[10]

Financing Source	Accessibility Level	Risk Level (Perceived by Lenders)	Suitability for Innovation
Internal Capital	High	Low	Moderate
Bank Loans	Medium	Medium	Moderate
Government Grants	Medium	Medium	High

[9] Author created
[10] Author created

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Venture Capital	Low	High	High
Crowdfunding	Low	High	Moderate
Supplier Credit	Medium	Medium	Low

This table provides a comparative overview of various financing sources used by textile enterprises to support innovation. *Internal capital* is the most accessible and carries the least risk but offers only moderate innovation support due to limited scalability. *Bank loans* are moderately accessible but come with institutional risk assessments that can hinder funding for unproven innovation. *Government grants* are a valuable source with high suitability for innovation, though access often involves complex procedures. *Venture capital* and *crowdfunding* are less accessible and perceived as high-risk, yet they provide strong potential for innovation when available. *Supplier credit* remains a moderate option, generally used for operational support rather than true innovation funding. This comparison highlights the importance of diversifying financing tools and creating a more enabling environment for innovation in the textile sector.

Conclusion

The textile industry plays a vital role in the economic development of many countries, particularly in labor-intensive and export-oriented economies. As global markets increasingly demand sustainable, high-quality, and competitively priced textile products, the pressure on enterprises to innovate is growing. Innovation—whether in the form of new materials, eco-friendly production processes, or digital transformation—is no longer optional, but essential for survival and long-term growth.

However, this study has revealed that despite the growing importance of innovation, many textile enterprises face critical financial barriers that hinder their innovation capacity. Limited access to capital, insufficient collateral, high interest rates, and a general lack of confidence from financial institutions toward innovation-related risks continue to restrict the ability of firms, particularly SMEs, to pursue transformative projects. Furthermore, although public support systems and government subsidies exist in many regions, they are often plagued by inefficiencies, such as complicated procedures, long approval times, and a lack of alignment with the practical needs of the textile sector.

The research findings emphasize that improving innovation financing requires a comprehensive and integrated approach. It is not merely a question of injecting more capital into the industry, but of building an innovation-friendly financial ecosystem. This includes increasing financial literacy among enterprise leaders, streamlining government support, promoting new financing models like blended finance and venture capital, and creating platforms where private investors and textile innovators can collaborate. In this context, financial institutions, policymakers, industry associations, and educational institutions all have a role to play in supporting textile firms’ transition toward more innovative and sustainable practices.

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Importantly, the success stories analyzed in this study illustrate that when enterprises combine strong internal strategic planning with external partnerships and targeted financial instruments, innovation becomes more accessible and less risky. Enterprises that can demonstrate clear business models, potential returns, and long-term vision are more likely to gain the confidence of both public and private funders.

In conclusion, the development of effective and inclusive financial support systems is fundamental to unlocking the innovative potential of textile enterprises. By addressing the structural, institutional, and educational gaps in the current financing environment, stakeholders can foster a textile industry that is not only more competitive in global markets but also more resilient, sustainable, and responsive to the demands of the 21st century.

Recommendations

1. Develop Sector-Specific Financial Instruments

Governments and financial institutions should design innovation financing programs tailored to the needs of textile enterprises. These should consider the industry's capital intensity, production cycles, and focus on sustainability.

2. Promote Blended and Alternative Financing Models

Encourage the use of blended finance (e.g., combining grants, loans, and equity) and alternative sources like crowdfunding, venture capital, and green bonds to diversify funding options.

3. Strengthen Financial Literacy and Investment Readiness

Provide training programs and advisory services to textile firms—especially SMEs—on financial planning, proposal writing, and risk management to enhance their access to funding.

4. Enhance the Efficiency of Public Support Programs

Simplify application and disbursement procedures for government innovation funds. Introduce transparency measures and feedback mechanisms to ensure programs are responsive to industry needs.

5. Foster Innovation Ecosystems and Clusters

Promote collaboration among firms, research institutions, and financial entities through innovation clusters and public-private partnerships to share risks and reduce financing burdens.

6. Digitize Access to Finance

Support the development and use of digital platforms that connect textile enterprises with investors, donors, and government support in a transparent and timely manner.

By implementing these recommendations, policymakers and industry leaders can create an enabling environment that supports the long-term innovation capacity of the textile sector—thereby strengthening its competitiveness, sustainability, and contribution to national economic development.

References:

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https://www.gejournal.net/index.php/IJSSIR

1. Amin, M. (2021). *Financing innovation in small and medium enterprises: A cross-country analysis*. Journal of Small Business and Enterprise Development, 28(5), 713–728. https://doi.org/10.1108/JSBED-12-2020-0451

2. Bianchi, C., & Labory, S. (2018). *Innovation policy in the textile industry: The role of regional innovation systems*. European Planning Studies, 26(2), 345–363. https://doi.org/10.1080/09654313.2017.1361590

3. Cosh, A., Fu, X., & Hughes, A. (2012). *Organisation structure and innovation performance in different environments*. Small Business Economics, 39(2), 301–317. https://doi.org/10.1007/s11187-010-9304-5

4. Gereffi, G., & Frederick, S. (2010). *The global apparel value chain, trade, and the crisis: Challenges and opportunities for developing countries*. World Bank Policy Research Working Paper No. 5281. https://doi.org/10.1596/1813-9450-5281

5. OECD. (2020). *Financing SMEs and Entrepreneurs 2020: An OECD Scoreboard*. OECD Publishing. https://doi.org/10.1787/061fe03d-en

6. Schwienbacher, A., & Larralde, B. (2012). *Crowdfunding of small entrepreneurial ventures*. In D. Cumming (Ed.), The Oxford Handbook of Entrepreneurial Finance (pp. 369–391). Oxford University Press.

7. UNIDO. (2021). *Innovation for sustainable industrial development: The role of finance in innovation ecosystems*. United Nations Industrial Development Organization. Retrieved from https://www.unido.org/resources

8. World Bank. (2019). *Innovative finance for development solutions*. World Bank Group Publications. Retrieved from https://www.worldbank.org

9. Ayyagari, M., Demirgüç-Kunt, A., & Maksimovic, V. (2011). Firm innovation in emerging markets: The role of finance, governance, and competition. *Journal of Financial and Quantitative Analysis, 46*(6), 1545–1580. https://doi.org/10.1017/S0022109011000378

10. Freeman, C., & Soete, L. (1997). *The economics of industrial innovation* (3rd ed.). MIT Press.

11. Lee, K., & Lim, C. (2018). Industry-specific innovation policies and financing instruments: Lessons from Korea's textile industry. *Science, Technology and Society, 23*(3), 497–515. https://doi.org/10.1177/0971721818780502

12. Lundvall, B.-Å. (2007). National innovation systems—Analytical concept and development tool. *Industry and Innovation, 14*(1), 95–119. https://doi.org/10.1080/13662710601130863

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