Research on the Impact of Investment-Financing Maturity Mismatch on Corporate Green Technology Innovation

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Abstract

Against the backdrop of China's "dual carbon" strategic goals and the shift toward high-quality economic development, green technology innovation has become a core engine driving corporate low-carbon transformation and sustainable growth. This paper focuses on the intrinsic relationship between investment-financing maturity mismatch and corporate green technology innovation, exploring how the structural mismatch between long-term investment demand and short-term financing supply affects enterprises' green innovation activities. Using the panel data of China's A-share listed companies on the Shanghai and Shenzhen Stock Exchanges from 2008 to 2023, this study employs a fixed-effects model, mediation effect test and heterogeneity analysis to empirically examine the inhibitory effect and influence mechanism of investment-financing maturity mismatch on corporate green innovation. The empirical results show that investment-financing maturity mismatch significantly suppresses both the quantity and quality of corporate green technology innovation, and its inhibitory effect on green innovation quality is more pronounced than that on innovation quantity. Further mechanism tests indicate that financing constraints and R&D investment serve as critical transmission channels through which maturity mismatch impedes green innovation. Moreover, heterogeneity analysis reveals that the inhibitory impact is relatively stronger in high-tech industries, state-owned enterprises, non-heavily polluting enterprises and growth-stage enterprises. Finally, this paper proposes targeted policy implications including optimizing financial supply structure, improving corporate internal governance, strengthening policy coordination and innovation, and perfecting market-oriented allocation mechanisms. The conclusions not only enrich the research on financing constraints and green innovation, but also provide a theoretical reference and practical basis for optimizing financial resource allocation, enhancing policy implementation efficiency and supporting corporate green transformation decisions.

Keywords

Investment-financing Maturity Mismatch, Green Innovation, Financing Constraints, R&D Investment