

# Research on the Impact of Financial Innovation on Low Carbon Transformation of Enterprises

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## **Abstract**

Under the dual background of financial services for the real economy and green transformation and development, financial innovation provides new ideas for low-carbon transformation and development of enterprises. Financial innovation aims to restructure financial elements, expand financial supply and optimize resource allocation, alleviate the cost and technological pressure of enterprise transformation, and improve the autonomy and effectiveness of low-carbon transformation and development through effective constraints and incentives, thereby solving the practical problem of enterprises not wanting to or not being able to transform. To further demonstrate the impact mechanism of financial innovation on low-carbon transformation of enterprises, this article is based on panel data of heavily polluting enterprises from 2008 to 2021. The super efficiency SBM model is used and combined with the GML index to calculate the green total factor productivity of enterprises as a proxy variable for low-carbon transformation. A two-way fixed effects model is used for empirical analysis. The results show that financial innovation has a U-shaped effect on the low-carbon transformation of enterprises, with financing constraints playing a mediating role. Heterogeneity analysis found that financial innovation in the eastern region and state-owned enterprises has a more significant impact on low-carbon transformation; From the perspective of financial innovation types, financial regulatory innovation has a greater impact on the low-carbon transformation of enterprises. Therefore, the research conclusion of this article can provide reference basis for relevant departments to formulate targeted policies, thereby providing support for low-carbon transformation of enterprises, empowering high-quality development of enterprises, and promoting the process of economic low-carbon transformation.

## **Keywords**

Financial Innovation, Low-carbon Transformation, Green Total Factor Productivity, Nonlinear Effects