

# Study on the Influence of Green Finance Development Level on Carbon Emission Reduction of SMEs in Beijing-Tianjin-Hebei

**Guomeng Huang\***

School of Economics and Management, China University of Petroleum (East China), Qingdao, China

## Email address:

719705217@qq.com (Guomeng Huang)

\*Corresponding author

## Abstract

The green and low-carbon development of the economy and society constitutes a crucial aspect for achieving high-quality development, within which carbon emission reduction by industrial enterprises plays a vital role. This paper initially reviews the literature both domestically and internationally and, based on relevant theories, analyzes how the development level of green finance influences carbon emission reduction by small and medium-sized enterprises (SMEs) through pathways such as technological advancement, greening of the industrial structure, and optimization of the consumption structure. Secondly, an evaluation index system for the development level of green finance is constructed. The entropy method is employed to calculate the data on the development level of green finance in the Beijing-Tianjin-Hebei region. Combined with the merged sample of SMEs in the Beijing-Tianjin-Hebei region from the China Industrial Enterprise Database and the CSMAR database during 2017-2022, an in-depth study is conducted on the impact of the development level of green finance on carbon emission reduction by SMEs in the Beijing-Tianjin-Hebei region. The research findings are as follows: (1) Overall, the development level of green finance has a significantly negative correlation with the carbon emissions of SMEs in the Beijing-Tianjin-Hebei region, meaning that an increase in the development level of green finance reduces the carbon emissions of SMEs in the Beijing-Tianjin-Hebei region. (2) The results of heterogeneity analysis reveal that at the level of enterprise, the development level of green finance has a more pronounced inhibitory effect on the carbon emission reduction of listed SMEs. At the provincial level, compared with the Hebei region, which lags behind in both human capital and economic development, the development level of green finance in Beijing, which boasts a more abundant human capital and a higher economic development level, has a more significant inhibitory effect on the carbon emission reduction of SMEs in the region. The research of this paper holds implications for achieving the "dual carbon" goals, promoting economic green transformation, and high-quality development.

## Keywords

Green Finance, Resource Allocation, Enterprise Emission Reduction, Impact