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ANALYSIS ON THE INFLUENCING FACTORS AND SPATIAL HETEROGENEITY OF GREEN TECHNOLOGY INNOVATION IN HIGH-TECH INDUSTRY

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Abstract

The high-tech industry, an important guarantee for high-quality economic development, whose green technology innovation (GTI) is the benchmark for industrial development. Based on panel data of high-tech industries in 30 provinces of China from 2004 to 2017, this paper tests the impact of multidimensional factors such as government factors, market factors, financial factors, and international factors on the level of high-tech industries' GTI. The findings are: (1) The GTI of high-tech has been improved continuously from 2004 to 2017, and it shows obvious regional heterogeneity. (2) In terms of influencing factors, government subsidies, adjustment of sewage charge standard, market factors, foreign direct investment and green credit have a positive role in promoting GTI of high-tech industry, while the intensity of command-controlled environmental regulation has a significant negative impact. (3) The cross-sectional heterogeneity analysis shows that the influencing factors of GTI in high-tech industries in the East, Middle and West are not consistent, and the adjustment of sewage charge standard has a significant impact in the East and West, but a weak role in the Middle regions. (4) Further research on the mechanism shows that the adjustment of sewage charge standard promotes the improvement of GTI through two ways of R&D investment and human capital level.

Key words: green technology innovation, heterogeneity, high-tech industry, influencing factors, quasi natural experiment

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