



“Gheorghe Asachi” Technical University of Iasi, Romania



IMPACT OF CARBON EMISSION TRADING PILOT POLICY ON GREEN INNOVATION CAPABILITY IN CHINA

Mingyang Zhang^{1*}, Jiayue Lu^{2,3}

¹*Department of Management Science and Engineering, School of Economics and Management Beijing Forestry University, China*

²*National Science Library, Chinese Academy of Sciences, China*

³*Department of Information Resources Management, School of Economics and Management, University of Chinese Academy of Sciences, China*

Abstract

This study investigates the impact of the Carbon Emission Trading Pilot Policy on regional green innovation capacity in China. Using provincial panel data from 2008-2019, the synthetic control method is employed to empirically evaluate the effects of pilot policies implemented in Beijing, Shanghai, Tianjin, Chongqing, Hubei, Guangdong, and Shenzhen. The results indicated that the policies had a significant positive influence on green invention patent applications across pilots, with varying strength and timing of impacts. Carbon trading scale exhibits a positive association with green innovation, explaining divergent policy effects. The findings may contribute to scholarship on environmental regulations and innovation. Practical implications are discussed to inform carbon market development and leveraging region-specific advantages.

Key words: carbon emission, carbon trading pilot policy, green innovation, synthetic control method

Received: July, 2023; Revised final: September, 2023; Accepted: October, 2023; Published in final edited form: November, 2023

* Author to whom all correspondence should be addressed: e-mail: mingyangzhang@bjfu.edu.cn