



香港恒生大學  
THE HANG SENG UNIVERSITY  
OF HONG KONG



School of Business  
The Hang Seng University of Hong Kong

*Paper Number: MS0021*

## **Can Internal Carbon Pricing Reduce Carbon Emissions of Multinational Enterprise?**

**Jialu Ma**

*George Washington University  
USA*

**Jeffrey Kuo**

*George Washington University  
USA*

## Can Internal Carbon Pricing Reduce Carbon Emissions of Multinational Enterprise?

Jialu Ma\*

Department of Economics, George Washington University, USA

[jialuma@gwu.edu](mailto:jialuma@gwu.edu)

Jeffrey Kuo

Department of Economics, George Washington University, USA

[jeffkuo@gwu.edu](mailto:jeffkuo@gwu.edu)

### ABSTRACT

Reducing carbon emissions has become not only a corporate social responsibility but also a key business strategy for companies to manage climate risk in their global supply chains. Multinational enterprises are using internal carbon pricing approaches, including the internal carbon fee and the shadow price, to abate carbon emissions. This research examines whether internal carbon pricing can effectively lower carbon emissions. We construct a unique dataset that tracks multinationals' use of internal carbon pricing based on their disclosure records to the Climate Disclosure Project. We employ propensity score matching and fixed-effects model on the panel data of multinationals across Europe, North America and Asia from 2013 to 2017 to address endogeneity bias. The results show that using internal carbon pricing has a significant negative effect on carbon emissions. The study provides insightful implications that internal carbon pricing could improve environmental performance of multinationals while serving as an ideal complement to government-imposed carbon pricing regulations.

**Keywords:** internal carbon pricing, climate change, corporate social responsibility, carbon emissions, propensity score matching