

Distinguishing the Complex Effects of Foreign Direct Investment on Environmental Pollution: Evidence from China

Jianxun Chen,^a Hui Tan,^b and Yingran Ma^c

Attracting foreign direct investment (FDI) to boost local economy is a priority for most developing countries. However, FDI can also bring in pollution-intensive industries as well as environmental-friendly technologies. Whether FDI can increase or reduce environmental pollution in host countries is a controversial question. Given the theoretical debate and mixed findings regarding this subject, this study analyzes mechanisms and pollutant types to investigate the effects of FDI on different types of environmental pollution.

We select China, one of the top recipients of FDI in recent years, as our research context. Owing to economic reform and the opening-up policy, as well as large market potential and human capital endowment, China has been the preferred investment location for foreign firms. At the same time, as a result of rapid industrialization, energy consumption and environmental pollution have also become a serious problem in China. We use China's provincial panel data from 1995 to 2015 as our samples to examine the effects of FDI on different types of environmental pollution.

We find that FDI mitigates air pollution, suggesting the pollution halo effect. However, it has insignificant effect on water and solid pollution. We also reveal that technology effect is most dominant, followed by scale effect and structure effect. In addition, by taking into account of time effect to reflect environmental policy change, we suggest that pollution halo effect mainly occurs after air pollution policy revision. Our finding provides insight on the complex effect and mechanisms of FDI on different types of environmental pollution, thereby helping to reconcile the mixed findings in the literature.

Our findings also have policy implications. Our study suggests that local governments in developing countries should not adopt a universal policy for controlling pollution. Instead, they should have more authority to form specific environmental policies to regulate different pollutants. In addition, local governments should take measures to create fair and open institutional environments for developing local firms' innovation abilities. Such effort can enhance local firms' absorptive capacity on clean technology.

a Institute of International Economy, University of International Business and Economics.

b Corresponding author. School of Business and Management, Royal Holloway, University of London, Surrey TW20 0EX, UK. E-mail: Hui.Tan@rhul.ac.uk.

c Simon Business School, University of Rochester.