

Climate Change and the Role of Foreign-Invested Enterprises

Authors : Xuemei Jiang, Kunfu Zhu, Shouyang Wang

Abstract : In this paper, we selected China as a case and employ a time-series of unique input-output tables distinguishing firm ownership and processing exports, to evaluate the role of foreign-invested enterprises (FIEs) in China's rapid carbon dioxide emission growth. The results suggested that FIEs contributed to 11.55% of the economic outputs' growth in China between 1992-2010, but accounted for only 9.65% of the growth of carbon dioxide emissions. In relative term, until 2010 FIEs still emitted much less than Chinese-owned enterprises (COEs) when producing the same amount of outputs, although COEs experienced much faster technology upgrades. In an ideal scenario where we assume the final demands remain unchanged and COEs completely mirror the advanced technologies of FIEs, more than 2000 Mt of carbon dioxide emissions would be reduced for China in 2010. From a policy perspective, the widespread FIEs are very effective and efficient channel to encourage technology transfer from developed to developing countries.

Keywords : carbon dioxide emissions, foreign-invested enterprises, technology transfer, input-output analysis, China

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