

Energy Intensity and Investment Ownership Across Chinese Provinces

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Abstract

The main objective of this paper is to investigate whether openness and investment ownership are key factors in explaining the diffusion of energy-saving technologies in China. Compared with previous studies, the novel aspect of this work is the use of a rich dataset at provincial level, which allows considering the high level of regional heterogeneity. The unbalanced regional growth has been transmitted into differences in the need of energy resources across the vast territory of China. A detailed analysis of these issues may provide new insights into the energy situation in this country. The analysis is also disaggregated by type of energy: coal, electricity and petroleum. We estimate the models by panel corrected standard errors developed by Beck and Katz (1995) over the period 1985-2008. Results obtained confirm the hypothesis that both foreign and non-state investments play a leading role in the decline of energy intensity across Chinese regions, whereas there is no evidence about a positive contribution of state investment. The findings also reveal differences in energy intensity across regions confirming the importance of accounting for the regional dimension when analyzing energy consumption in China.

Key words: Energy intensity, Chinese provinces, Investment ownership, FDI, Technology diffusion.

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