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## International Technology Spillover, Energy Consumption and CO<sub>2</sub> Emissions in China

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### ABSTRACT

Based on autoregressive distributed lag model, we empirically study the interrelationship between international technology spillover, energy consumption and CO<sub>2</sub> emissions by using time series data covering the period 1960-2008. The results show that international technology spillover, technology transformation and domestic R&D input cut down CO<sub>2</sub> emissions. R&D input has both direct and indirect effect on the reduction in CO<sub>2</sub> emissions. On the one hand, R&D input promotes domestic innovation and accelerates transformation, absorption and utilization of the technology from forerunners. On the other hand, R&D input reduces CO<sub>2</sub> emissions by rising energy efficiency. Energy consumption increases CO<sub>2</sub> emissions.

### KEYWORDS

Technology Spillover; Energy Consumption; CO<sub>2</sub> Emissions

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