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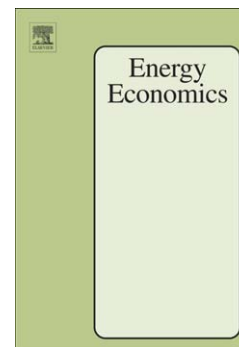
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Does Energy Efficiency Promote Economic Growth? Evidence from a Multicountry and Multisectoral Panel Dataset

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Abstract

We examine the causal relationship between energy efficiency and economic growth based on panel data for 56 high- and middle-income economies from 1978 to 2012. Using a panel vector autoregression approach, we find evidence of a long-run Granger causality from economic growth to lower energy intensity for all economies. We also find evidence of long-run bidirectional causality between lower energy intensity and higher economic growth for middle-income economies. This finding suggests that beyond climate benefits, middle-income economies may also earn an extra growth dividend from energy efficiency measures.

Keywords: Energy efficiency, energy intensity, economic growth, panel cointegration, Granger causality, vector autoregressions

JEL Classification: C32, C33, O13, Q43

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