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**CAUSALITY BETWEEN ENERGY CONSUMPTION AND ECONOMIC  
GROWTH IN OECD AND NON-OECD COUNTRIES : A PANEL DATA  
APPROACH**

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Energy arguably plays a vital role in economic development. Consequently, causality between energy and economic growth has been a topical issue for academic research for several decades given its importance for governments in the formulation of energy policies. Given the global environmental problems, it is essential that there is some understanding of the causal effects of energy consumption on development. In particular, if it is found that this effect is greater in the developing world, then any policy to reduce energy consumption (and hence emissions) would have a disproportionate effect on their development.

There are many studies investigating causality between energy and economic growth using time series data but there are only a few using panel data. Therefore in this paper the causal relationship between energy and GDP is empirically investigated in a panel context using recently developed panel cointegration techniques utilising a consistent data set for the panel of 30 OECD countries and the panel of 78 non-OECD countries.

The results show evidence of bi-directional causality in all panel groups. The bi-directional causality indicates that there is mutual interdependence of energy and the economy in these group of countries; suggesting that limiting energy use (e.g. through energy conservation) would hamper economic growth in all countries.