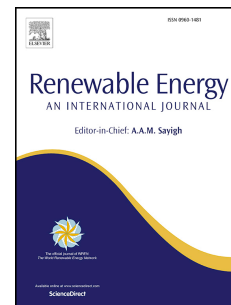


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Focusing on the right targets: Economic factors driving non-hydro renewable energy transition

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Abstract

Reducing fossil fuels use while promoting the adoption of clean and renewable energy sources is crucial for mitigating climate change and attaining the sustainable development goals. This study investigates the driving forces of the share of non-hydroelectricity sources in total electricity generation. Using panel data of forty-six developed and developing countries over 1980-2011 and employing panel cointegration estimation techniques, we examine the key factors that influence the share of non-hydro renewable energy sources in the short and long run. The results of the study show that the driving factors have different impacts on the size and share of non-hydro renewable energy; and these impacts are mostly in the long run. Oil price increase and financial development has a significant positive effect on the amount and share of non-hydro renewable electricity generation. The impact of trade openness is ambiguous. Economic development enhances the size of non-hydro renewables but undermines its share in total electricity. Foreign direct investments, ratification of the Kyoto protocol, gross fixed capital formation and resource rent have no significant impact on non-hydro renewable electricity generation. Based on the results, appropriate policy recommendations are proffered.

Keywords: Renewable energy, non-hydro electricity generation; climate change mitigation; panel cointegration

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