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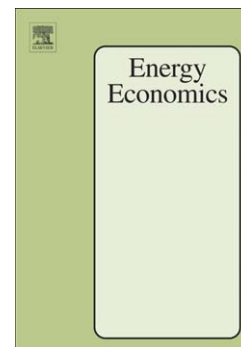
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# Energy Consumption, Financial Development and Economic Growth in India: New Evidence from a Nonlinear and Asymmetric Analysis

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## Abstract

This paper investigates the asymmetric relationship between energy consumption and economic growth by incorporating financial development, capital and labour into a production function covering the Indian economy from 1960Q<sub>1</sub>–2015Q<sub>4</sub>. The nonlinear autoregressive distributed lag bounds testing approach is applied to examine the asymmetric cointegration between the variables. An asymmetric causality test is also employed to examine the causal association between the considered variables. The results indicate cointegration between the variables in the presence of asymmetries. The asymmetric causality results show that only negative shocks to energy consumption have impacts on economic growth. In the same vein, only negative shocks to financial development have impacts on economic growth. By contrast, symmetrically, capital formation causes economic growth. Finally, over the study period, a neutral effect exists between the labour force and economic growth in India. The implications of these results for growth policies in India are also discussed.

*Keywords:* Financial Development, Energy, Growth, India, Asymmetries

*JEL classification:* O13

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