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Dynamic linkages between non-renewable energy, renewable energy and economic growth through nonlinear ARDL approach: evidence from Malaysia
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Abstract
The purpose of this paper is to investigate the links between renewable energy (RE), non-renewable energy (NRE), capital, labour and economic growth, using the nonlinear autoregressive distributive lag (NARDL) model in Malaysia for the period of 1980–2018. The results of NARDL confirm the asymmetric effect of RE and NRE consumption on the economic growth in the long run as well as the short run in Malaysia. The findings also show that in the long and short run, positive shocks of NRE are greater than the positive shocks of RE. It indicates that Malaysia's economic growth is highly dependent on NRE which is not a good indication as NRE consumption increases carbon dioxide (CO2) emission in the country. Moreover, the empirical results of this study demonstrated that RE consumption reduction accelerates economic growth, whereas NRE consumption reduction decreases economic growth. It can have claimed that in Malaysia, RE is still more expensive than NRE. In conclusion, this study offered a variety of measures to develop RE to reduce the dependency on NRE consumption.

Author Keywords
Asymmetric; Economic growth; Malaysia; NARDL; Non-renewable energy; Renewable energy

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