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Energy Consumption and Economic Growth: Testimony of Selected Sub-Saharan Africa Countries

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Abstract : The main purpose of this paper is to examine the causal relationship between energy consumption and economic growth in Sub-Saharan Africa using panel data techniques. An annual data on energy consumption and Economic Growth (proxied by real gross domestic product per capita) spanning from 1990 to 2016 from the World bank index database was used. The results of the Augmented Dickey–Fuller unit root test shows that the series for all countries are not stationary at levels. However, the log of economic growth in Benin and Congo become stationary after taking the differences of the data, and log of energy consumption become stationary for all countries and Log of economic growth in Kenya and Zimbabwe were found to be stationary after taking the second differences of the panel series. The findings of the Johansen cointegration test demonstrate that the variables Log of Energy Consumption and Log of economic growth are not co-integrated for the cases of Kenya and Zimbabwe, so no long-run relationship between the variables were established in any country. The Granger causality test indicates that there is a unidirectional causality running from energy use to economic growth in Kenya and no causal linkage between Energy consumption and economic growth in Benin, Congo and Zimbabwe.

Keywords : Cointegration, Granger Causality, Sub-Sahara Africa, World Bank Development Indicators
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