

Relationship between Electricity Consumption and Economic Growth: Evidence from Nigeria (1971-2012)

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Abstract : Few scholars disagree that electricity consumption is an important supporting factor for economy growth. However, the relationship between electricity consumption and economy growth has different manifestation in different countries according to previous studies. This paper examines the causal relationship between electricity consumption and economic growth for Nigeria. In an attempt to do this, the paper tests the validity of the modernization or depending hypothesis by employing various econometric tools such as Augmented Dickey Fuller (ADF) and Johansen Co-integration test, the Error Correction Mechanism (ECM) and Granger Causality test on time series data from 1971-2012. The Granger causality is found not to run from electricity consumption to real GDP and from GDP to electricity consumption during the year of study. The null hypothesis is accepted at the 5 per cent level of significance where the probability value (0.2251 and 0.8251) is greater than five per cent level of significance because both of them are probably determined by some other factors like; increase in urban population, unemployment rate and the number of Nigerians that benefit from the increase in GDP and increase in electricity demand is not determined by the increase in GDP (income) over the period of study because electricity demand has always been greater than consumption. Consequently; the policy makers in Nigeria should place priority in early stages of reconstruction on building capacity additions and infrastructure development of the electric power sector as this would force the sustainable economic growth in Nigeria.

Keywords : economic growth, electricity consumption, error correction mechanism, granger causality test

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