

Impact of Petroleum consumption on economic growth in Kenya

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Abstract:

This study sought to investigate the relationship between petroleum consumption and economic growth between 1980 and 2009 in Kenya. The amount of petroleum consumed was used as a proxy of energy infrastructure growth. In addition, other variables were hypothesized to affect economic growth including private physical capital and labor. The study employed co integration analysis and error correction methods to investigate the relationship. The analysis paid attention to the timeseries properties of the data and the existence of long-run equilibrium between the variables. Granger causality tests were therefore carried out. The results of unit root tests indicate that all the series are integrated of order one, implying that the series are stationary after first-differencing. The co integration tests results indicate that the series are co integrated, implying that there is a long-run relationship between the variables in the model. The estimation results of the error-correction model indicate that petroleum consumption has positive short-run impact on real GDP. In addition, a deviation from long-run real GDP in a given year is corrected by about 18% in the subsequent year. The estimation results of the long-run model indicate that the output elasticity with respect to petroleum consumption is 0.017. Another result is that there is uni-directional Granger causality running from petroleum consumption to economic growth. Given the long-term positive effects on the economy the results suggested that an energy growth policy in the petroleum consumption should be adopted in such a way that it stimulates growth in the economy. Such growth would contribute to realization of vision 2030. Therefore, energy policy regarding petroleum consumption may be implemented in such a way that it further boosts economic growth as well as create investment opportunities in Kenya. On the other hand, the uni-directional causality between petroleum consumption and GDP implies that increase in petroleum consumption stimulate economic growth. Therefore, petroleum consumption may be encouraged as it is beneficial to the economy of the country.