Energy Consumption and Economic Growth: Evidence from the West African Sub Region

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Abstract

The availability of reliable energy supply to meet the demand of the growing population in West Africa is important for achieving not only economic growth but also meeting the sustainable development aspirations of the subregion. However, conflicting conclusions have been espoused on the energy-growth nexus with little information on the nexus in the sub-region. In this study we employ the panel cointegration techniques and data on total energy consumption, electricity consumption and petroleum consumption to establish the causal relationship between energy consumption and economic growth for the seventeen countries in the West African sub region. The results indicate that in the short run, there is no causal relationship running from total energy, electricity and petroleum consumption to growth. However, there is a unidirectional relationship running from growth to electricity consumption indicating that conservation policies in electricity may not have effect on economic growth. In the long run however, electricity and petroleum consumption were found to have a positive and significant impact on growth suggesting that policy choices should focus on enhancing the generation of these types of energy.