

Dynamic Effects of Energy Consumption, Economic Growth, International Trade and Urbanization on Environmental Degradation in Nigeria

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Abstract : Motivation: A crucial but difficult goal for governments and policymakers in Nigeria in recent years has been the sustainability of economic growth. This goal must be accomplished by regulating or lowering greenhouse gas emissions, which calls for switching to a low- or zero-carbon production system. The lack of in-depth empirical studies on the environmental impact of socioeconomic variables on Nigeria and a number of unresolved issues from earlier research is what led to the current study. Objective: This study fills an important empirical gap by investigating the existence of an Environmental Kuznets Curve hypothesis and the long and short-run dynamic impact of socioeconomic variables on ecological sustainability in Nigeria. Data and method: Annual time series data covering the period 1980 to 2020 and the Autoregressive Distributed Lag technique in the presence of structural breaks were adopted for this study. Results: The empirical findings support the existence of the environmental Kuznets curve hypothesis for Nigeria in the long and short run. Energy consumption and total import exacerbate environmental deterioration in the long and short run, whereas total export improves environmental quality in the long and short run. Financial development, which contributed to a conspicuous decrease in the level of environmental destruction in the long run, escalated it in the short run. In contrast, urbanization caused a significant increase in environmental damage in the long run but motivated a decrease in biodiversity loss in the short run. Implications: The government, policymakers, and all energy stakeholders should take additional measures to ensure the implementation and diversification of energy sources to accommodate more renewable energy sources that emit less carbon in order to promote efficiency in Nigeria's production processes and lower carbon emissions. In order to promote the production and trade of environmentally friendly goods, they should also revise and strengthen environmental policies. With affordable, dependable, and sustainable energy use for higher productivity and inclusive growth, Nigeria will be able to achieve its long-term development goals of good health and wellbeing.

Keywords : economic growth, energy consumption, environmental degradation, environmental Kuznets curve, urbanization, Nigeria

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