SELECTED READINGS ON ENVIRONMENTAL ECONOMICS

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CHAPTER 1

Re-investigating the Tenability of Environmental Kuznets Curve for Carbon Dioxide Emission: An ARDL Cointegration Approach for Nigeria.

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ABSTRACT

This study employs the Autoregressive Distributed Lag (ARDL) cointegration technique to investigate the tenability of Environmental Kuznets Curve (EKC) for CO2 by employing different functional forms. The study uses annual time-series data for the period 1970-2005 to investigate the long-run relationship between CO_2 pollution and GDP per capita in Nigeria. The basic motivation for employing this method lies in the fact that, it is relatively more efficient for studies with small sample compared to the conventional procedure based on Johansen and Juselius (1990) method. The 'level' form specification reveals a monotonically positive relationship between CO2 emission and GDP per capita, thereby, rejecting ECK-type relation. The semi log transformation establishes evidence for inverted-U shaped relation proposed under the EKC, yielding a turning point at N 4,934 (Nigerian Naira), even when theoretically advocated conditions are not met. Since EKC for growth in CO2 emission is a rather uncommon way of assessing the EKC assertion, we relied on the 'level' form specification for policy purpose. Of importance is that the results show that even when EKC does not exist for CO2 emission, such could be true for 'growth' in CO2 emission.