ABSTRACT

Environmental degradation is one of the negative impacts caused by an economic development and it has been a problem and a threat to all countries in the world for so many years. The purpose of this research is to prove the existence of Environmental Kuznets Curve (EKC) and the factors that cause environmental degradation in 5 BRICS countries. The variables used in this research are economic growth which is proxied by the GDP per capita, population, Renewable Energy Consumption, Foreign Direct Investment (FDI) and World Governance Index (WGI) on the level of methane emission in BRICS countries in the period of 2002-2018. This research uses panel data regression using the Fixed Effect Model and Autoregressive Distributed Lag-Error Correction Model (ARDL ECM) method.

Based on the results, it is known that the Environmental Kuznet Curve (EKC) Hypothesis is proven in all 5 BRICS countries. Foreign Direct Investment (FDI) variable has a positive and significant effect on the level of methane emission, World Governance Index (WGI) variable also has a positive but no significant effect. Meanwhile, population and renewable energy consumption variables have positive and negative effect, respectively, and both are no significant on the level of methane emission.

Keywords: Methane, Environmental Degradation, Environmental Kuznets Curve, Gross Domestic Bruto, Population, Renewable Energy Consumption, Foreign Direct Investment, Pollution Haven Hypothesis, Fixed Effect Model, Autoregressive Distributed Lag-Error Correction Model