

ABSTRACT

The economy that continues to grow causes energy consumption to increase.. The increasing energy consumption will lead to increasing CO₂ emissions which will lead to environmental degradation. This study aims to examine the causal relationship between economic growth, population growth, foreign direct investment, exports, energy consumption, and environmental degradation in Indonesia. The data used in this study are secondary data in the form of GDP per capita growth, population growth, foreign direct investment, exports, energy consumption, and CO₂ emissions in Indonesia 1981-2017. Data analysis uses unit root test, co-integration, and Granger causality based on the Vector Error Correction Model.

The results show that there is a bi-directional causality relationship between energy consumption and CO₂ emissions. This means that an increase in energy consumption directly affects CO₂ emissions, and that CO₂ emissions also stimulate further energy consumption. In addition, the results of this study also support the occurrence of uni-directional causality running from CO₂ emissions to economic growth, population growth, foreign direct investment, and export without any feedback effects.

Keywords: Economic Growth, Population Growth, Foreign Direct Investment, Export, Energy Consumption, CO₂ emissions, Environmental Degradation, VECM Granger Causality