ABSTRACT

Every Countries seek to improve their economies to remain competitive in the global market. However, the efforts to increase economic growth often come at the expense of the environment. Environmental degradation emergesas a negative externality associated with economic development. The increase in carbon dioxide (CO_2) emissions controbuted to environmental degradation

This study aims to analyze the long-term and short-term effects of GDP per capita,foreign direct investment, and fossil energy consumption in Indonesia in 1992- 2021. This research used the Error Correction Model (ECM) method.

The result show that the GDP per capita variable has an insignificant effect in the short term, while in the long term, GDP per capita has a significant positive impacton the increase in CO_2 emissions. The results also support the Pollution Haven Hypothesis theory because it was found that foreign direct investment (FDI) has asignificant and positive effect on the level of CO_2 emissions in the long run. Meanwhile, in the short-term analysis, it was found that FDI has a significant negative effect because basically the industrial activities of foreign companies operating in Indonesia need time to show their impact on carbon dioxide emissions. Furthermore, the energy consumption variable has a significant positive effect in the long term and short term. It means that an increase in fossil energy consumption causes an increase in the amount of carbon dioxide (CO_2) emissionsin, particulary in Indonesia.

Keywords*: Carbon Dioxide, Gross Domestic Product, Direct Investment, Fossil Energy Consumption, Error Correction Model*