ABSTRACT

Many developing countries including Indonesia are still largely dependent on fossil fuel power plants, even though the negative impact results in an increase in carbon emissions. In this study, the driving factors for emissions are seen from electricity consumption, GDP, industry value added and the ratio total exports of GDP. This study aims to look at the relationship between electricity consumption, economic growth, industrialization and trade openness on CO2 carbon emissions in Indonesia in 1983-2019.

This study uses secondary data in the form of time series data. Analysis in this study uses the Error Correction Model-Engle Granger (ECM-EG) method for short-term estimation results and the Cointegration Test for long-term estimation results.

The results showed that in the long run electricity consumption and industrialization had a significant positive effect on CO2 carbon emissions. In the short term, only economic growth has a positive effect on carbon emissions. This means that an increase in economic growth of 1 percent will increase CO2 carbon emissions by 91.85 percent in the short term. Trade openness is not found in the short term or long term. Simultaneously electricity consumption, economic growth, industrialization, and overcoming trade, together have a significant effect on carbon emissions in Indonesia in the short term.

***Keywords**: Carbon emission, electricity consumption, economic growth, industrialization, trade openness, ECM-EG*