

ABSTRACT

CO₂ emissions are the largest contributor to greenhouse gases that cause climate change and health problems on earth. Economic growth is one of the factors that drives the increase in CO₂ emissions. China and Indonesia are connected as ACFTA trading partners and will be countries in Asia that contribute the first and sixth largest CO₂ emissions in the world in 2022. Economic expansion is interpreted in terms of trade openness and FDI which can reduce or increase CO₂ emissions in each country. This research aims to analyze the long and short term relationship between trade openness and FDI on increasing CO₂ emissions. Then, this research will also prove the Environmental Kuznets Curve (EKC) hypothesis in China and Indonesia.

This research uses time series data from 1979-2022. To measure the dynamic approach, the Error Correction Model (ECM) method is applied in this research.

The long-term estimation results show that the EKC hypothesis is proven in China and Indonesia with turning points at per capita income of 12,012.82 US\$ and 5,699.84 US\$, respectively. The trade openness variable has a positive and significant effect on the long term and short term in China and the long term in Indonesia. However, in the short term in Indonesia, trade openness has a negative and insignificant effect. FDI has no significant effect in either the long or short term in China and Indonesia, which shows that the Pollution Haven Hypothesis or Pollution Halo Hypothesis is not proven in this study.

Keywords: CO₂ Emissions, Economic Growth, Environmental Kuznets Curve, Trade Openness, ECM.