

## **ABSTRACT**

The paradoxical phenomenon that often occurs is high economic growth followed by significant environmental degradation, as in the G20 member countries. This study analyzes the effect of per capita income, population, energy transition, and foreign direct investment (FDI) on CO<sub>2</sub> emissions in G-20 member countries.

The approach taken in this research is quantitative, with secondary data obtained from the World Bank and the World Economic Forum for 2018-2021. The method used to analyze the factors influencing CO<sub>2</sub> emissions in G-20 member countries is multiple linear regression with panel data.

Based on the results of the study showed that an increase in per capita income and population will significantly increase CO<sub>2</sub> emissions. This condition is possible due to structural transformation, which results in increased use of energy, especially those that are not environmentally friendly, which results in an increase in the production of carbon dioxide waste. Energy transition has a negative but insignificant effect on CO<sub>2</sub> emissions because the proportion of non-renewable energy use is greater than renewable energy. Foreign Direct Investment (FDI) has a positive but insignificant effect on CO<sub>2</sub> emissions.

**Keywords: CO<sub>2</sub> Emission, Income Per Capita, population, Energy, Transition, FDI**