

INTISARI

Penelitian ini bertujuan untuk menganalisis pengaruh *GDP perkapita*, *GDP perkapita* kuadrat, konsumsi energi, dan *Foreign Direct Investment* (FDI) terhadap emisi karbon (CO_2) per kapita di Indonesia periode 1990–2024 dengan menggunakan pendekatan *Environmental Kuznets Curve* (EKC). Penelitian ini menggunakan data sekunder *time series* tahunan yang diperoleh dari *World Bank* dan *Our World in Data* serta dianalisis menggunakan metode regresi linier berganda dengan pendekatan *Ordinary Least Square* (OLS). Variabel dependen dalam penelitian ini adalah emisi karbon per kapita, sedangkan variabel independennya terdiri dari *GDP perkapita*, *GDP perkapita* kuadrat, konsumsi energi, dan *Foreign Direct Investment* (FDI). Hasil penelitian menunjukkan bahwa *GDP perkapita* berpengaruh positif dan signifikan terhadap emisi karbon per kapita, *GDP perkapita* kuadrat berpengaruh negatif dan signifikan sehingga membuktikan keberlakuan hipotesis *Environmental Kuznets Curve* (EKC) di Indonesia, konsumsi energi berpengaruh positif dan signifikan terhadap emisi karbon per kapita, sedangkan *Foreign Direct Investment* (FDI) berpengaruh positif terhadap emisi karbon per kapita. Secara simultan, seluruh variabel independen berpengaruh signifikan terhadap emisi karbon per kapita di Indonesia. Berdasarkan hasil penelitian, dapat disimpulkan bahwa peningkatan aktivitas ekonomi di Indonesia masih diikuti oleh peningkatan emisi karbon akibat tingginya penggunaan energi berbasis bahan bakar fosil dan aktivitas ekonomi padat emisi sehingga diperlukan kebijakan pembangunan ekonomi berkelanjutan melalui pengembangan energi terbarukan, efisiensi energi, penggunaan teknologi ramah lingkungan, dan penguatan regulasi lingkungan untuk mengurangi emisi karbon di Indonesia.

Kata Kunci: Emisi Karbon, *Environmental Kuznets Curve* (EKC), *GDP perkapita*, Konsumsi Energi, *Foreign Direct Investment* (FDI).

ABSTRACT

The increase in economic activity and energy consumption is often associated with rising carbon dioxide (CO₂) emissions, particularly in developing countries such as Indonesia. This study aims to analyze the effects of Gross Domestic Product (GDP) per capita, squared GDP per capita, energy consumption, and Foreign Direct Investment (FDI) on carbon emissions per capita in Indonesia during the period 1990–2024. This study employs secondary data obtained from the World Development Indicators (WDI) and Our World in Data databases. The analytical method used is multiple linear regression with the Ordinary Least Squares (OLS) approach. In addition, this study examines the validity of the Environmental Kuznets Curve (EKC) hypothesis in Indonesia. The results indicate that GDP per capita has a positive but insignificant effect on carbon emissions per capita. Squared GDP per capita has a positive and significant effect on carbon emissions per capita. Energy consumption has a positive and significant effect on carbon emissions per capita, while FDI has a negative but insignificant effect on carbon emissions per capita. Simultaneously, all independent variables significantly affect carbon emissions per capita in Indonesia. These findings suggest that the Environmental Kuznets Curve (EKC) hypothesis is not supported in Indonesia because the coefficient of squared GDP per capita is positive and significant, indicating that increasing economic activity in the long run is still accompanied by rising carbon emissions. Therefore, policies that promote the transition to clean energy, improve energy efficiency, and encourage environmentally friendly investments are needed to support sustainable economic development.

Keywords: *Environmental Kuznets Curve (EKC), carbon emissions per capita, GDP per capita, energy consumption, Foreign Direct Investment (FDI), Ordinary Least Squares (OLS).*