

ABSTRACT

The Effect of CO₂ Emissions, Renewable Energy Consumption, Forest Area on GDP of 5 ASEAN Member Countries in 1996-2020

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There is trade-off relationship between economic growth and environment is a very important issue to study in achieving sustainable development goals. Handling trade-off can be worked by massively diversifying renewable energy consumption and replanting forests with the result that economic growth continues to increase without damaging the environment. Therefore, this study aims to determine the effect of CO₂ emissions, Renewable Energy Consumption, Forest Area on GDP of 5 ASEAN member countries in 1996-2020. Data collection was obtained from the official website world bank 5 ASEAN member countries. This research uses panel data regression which combines data cross-section with time series data (time series). The research results obtained partially of 5 ASEAN member countries are that CO₂ emissions have a significant negative effect on GDP, renewable energy consumption has a significant negative effect on GDP, meanwhile forest area has no significant effect on GDP. While, the results of research simultaneously CO₂ emissions, renewable energy consumption, forest area together they influence the GDP variable.

Keywords: *GDP, CO₂ Emissions, Renewable Energy Consumption, Forest Area*

ABSTRAK

PENGARUH EMISI CO₂, *RENEWABLE ENERGY CONSUMPTION*, *FOREST AREA* TERHADAP PDB DI 5 NEGARA ANGGOTA ASEAN TAHUN 1996-2020

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Adanya *trade-off* antara pertumbuhan ekonomi dan lingkungan menjadi isu yang sangat penting untuk dikaji dalam mencapai tujuan pembangunan berkelanjutan. Penanganan *trade-off* ini dapat dilakukan dengan diversifikasi energi terbarukan secara massif dan penanaman kembali hutan sehingga pertumbuhan ekonomi tetap meningkat tanpa merusak lingkungan. Oleh karena itu, penelitian ini bertujuan untuk mengetahui pengaruh emisi CO₂, *renewable energy consumption*, *forest area* terhadap PDB di 5 negara anggota ASEAN tahun 1996-2020. Pengumpulan data diperoleh dari website resmi *world bank* 5 negara anggota ASEAN. Penelitian ini menggunakan regresi data panel yang menggabungkan antara data *cross section* dengan data runtun waktu (*time series*). Hasil penelitian yang diperoleh secara parsial di 5 negara anggota ASEAN yakni emisi CO₂ berpengaruh negatif signifikan terhadap PDB, *renewable energy consumption* berpengaruh negatif signifikan terhadap PDB, sedangkan *forest area* tidak berpengaruh signifikan terhadap PDB. Sedangkan hasil penelitian secara simultan emisi CO₂, *renewable energy consumption*, *forest area* secara bersama sama berpengaruh terhadap variable PDB.

Kata kunci: PDB, Emisi CO₂, *Renewable Energy Consumption*, *Forest Area*