

ABSTRACT

ANALYSIS OF MACROECONOMIC INDICATORS IN RELATION TO THE ENVIRONMENT IN FIVE ASEAN COUNTRIES

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This study aims to analyze and examine the extent to which economic growth, population, and foreign direct investment influence CO₂ emissions in five ASEAN countries, using secondary panel data from 2000 to 2023 obtained from the World Bank website. The research method used is descriptive quantitative and employs stationarity tests, optimal lag tests, cointegration tests, Granger causality tests, VECM model tests, impulse response factor (IRF), and variance decompositions. The results show that: (1) economic growth has both long-term and short-term relationships with CO₂ emissions, (2) population has no short-term or long-term relationship with CO₂ emissions, (3) foreign direct investment has both short-term and long-term effects on CO₂ emissions.

Keywords: *Economic Growth, Population, Foreign Direct Investment, CO₂ Emissions.*

ABSTRAK

ANALISIS INDIKATOR MAKROEKONOMI TERHADAP LINGKUNGAN DI LIMA NEGARA ASEAN

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Penelitian ini bertujuan untuk menganalisis serta melihat seberapa besar pengaruh pertumbuhan ekonomi, populasi, dan *foreign direct investment* terhadap emisi CO₂ di lima negara ASEAN, menggunakan data sekunder berbentuk data panel dari tahun 2000-2023 yang diperoleh dari *website World Bank*. Metode penelitian yang digunakan berjenis kuantitatif deskriptif serta menggunakan uji stasioneritas, uji lag optimum, uji kointegrasi, uji kausalitas granger, uji model VECM, impulse response factor (IRF), dan variance depositions. Hasil menunjukkan bahwa: (1) pertumbuhan ekonomi terhadap emisi CO₂ memiliki hubungan jangka panjang dan jangka pendek, (2) populasi terhadap emisi CO₂ tidak memiliki pengaruh hubungan jangka pendek dan jangka panjang, (3) foreign direct investment terhadap emisi CO₂ memiliki pengaruh jangka pendek dan jangka panjang.

Kata Kunci: Pertumbuhan Ekonomi, Populasi, Foreign Direct Investment, Emisi CO₂.