

ABSTRACT

In economic growth, industrialization has an important role because industrialization is an implication of technological progress, increased production, distribution, and specialization (Purnomo and Istiqomah, 2008). The development of industry in various sectors makes the pace of economic growth, so that it will open up jobs, and reduce unemployment in the area (Dewi, 2016). The factor that greatly influences the continuity and growth of the industrial sector is the availability of energy resources.

The purpose of this study is to analyze how economic growth, renewable energy, and fossil fuels affect the increase in carbon dioxide in 5 ASEAN countries (Indonesia, the Philippines, Thailand, Vietnam, Malaysia) during the 2007-2021 period. This study uses panel data regression analysis through the Fixed Effect Model (FEM) approach with the Generalized Least Square (GLS) method.

The partial results show that the variables of economic growth, fossil fuels, urbanization have a positive and significant effect on carbon dioxide emissions, while the renewable energy variable has a negative and significant effect on carbon dioxide emissions. While simultaneously the variables of economic growth, fossil fuels, renewable energy and urbanization together have a significant effect on carbon dioxide emissions in 5 ASEAN countries.

Keywords: CO2 emissions, economic growth, renewable energy, fossil fuels, urbanization