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THE INFLUENCE OF DIGITALIZATION ON CARBON EMISSIONS (CO_2)

IN ASEAN

UNDERGRADUATE THESIS

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THE INFLUENCE OF DIGITALIZATION ON CARBON EMISSIONS (CO_2) IN ASEAN

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ABSTRACT

This research aims to analyze how digitalization and energy consumption affect carbon emissions (CO_2) of several ASEAN countries. This study uses the Panel ARDL (Autoregressive Distributed Lag) estimation method. The data used in this study are secondary data in the 2000-2020 time periods. The variables used in this study are Fixed Broadband Subscription, Mobile Cellular Subscription, Internet Users, and Energy Consumption as independent variables and carbon emissions (CO_2) as the dependent variable. Based on the results, Mobile Cellular Subscription, Internet Users, and Energy Consumption are proven to increase carbon emissions in ASEAN countries in the long run. In contrast, Fixed Broadband Subscription is proven to contribute to reducing CO_2 emissions in the long run. In the short term, internet users and energy consumption also reduce CO_2 emissions in ASEAN. However, these variables do not have a significant impact on CO_2 emissions in ASEAN countries in the short term.

Keywords: Carbon Emissions (CO_2), Fixed Broadband Subscription, Mobile Cellular Subscription, Internet Users, Energy Consumption, and ARDL *(Autoregressive Distributed Lag)*

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