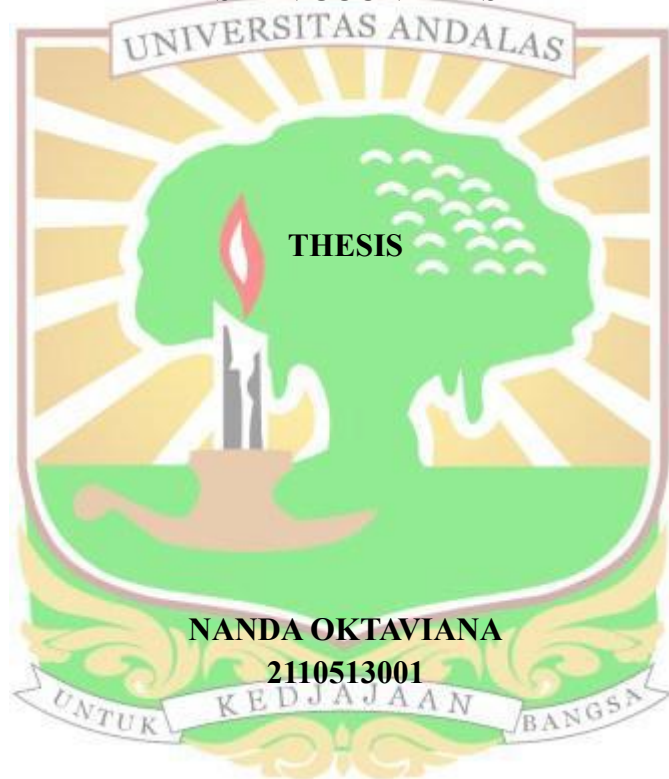




**UNIVERSITAS ANDALAS**

**THE SIMULTANEOUS IMPACTS OF RENEWABLE ENERGY  
CONSUMPTION ON ECONOMIC GROWTH AND CO<sub>2</sub> EMISSIONS IN  
ASEAN COUNTRIES**



**FACULTY OF ECONOMICS AND BUSINESS  
DEPARTMENT OF ECONOMICS  
PADANG  
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# **The Simultaneous Impacts of Renewable Energy Consumption on Economic Growth and CO<sub>2</sub> Emissions in ASEAN Countries**

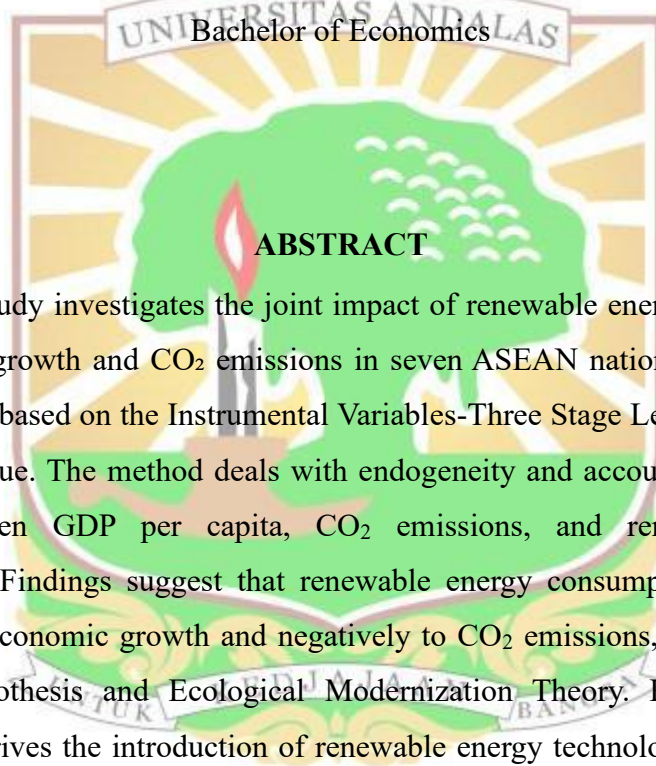
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## **ABSTRACT**

This study investigates the joint impact of renewable energy consumption on economic growth and CO<sub>2</sub> emissions in seven ASEAN nations, applied from 2001 to 2021, based on the Instrumental Variables-Three Stage Least Squares (IV-3SLS) technique. The method deals with endogeneity and accounts for feedback effects between GDP per capita, CO<sub>2</sub> emissions, and renewable energy consumption. Findings suggest that renewable energy consumption contributes positively to economic growth and negatively to CO<sub>2</sub> emissions, thus supporting feedback hypothesis and Ecological Modernization Theory. Rapid economic growth also drives the introduction of renewable energy technology, promoting a virtuous cycle. Findings from this study are enlightening for transitioning toward renewable energy paths to achieve sustainable development in developing countries and offer important policy recommendations for ASEAN policy-makers and stakeholders to develop integrated strategies that ensure simultaneous development and environment sustainability.

*Keywords:* Renewable energy, economic growth, CO<sub>2</sub> emissions, ASEAN

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