

ABSTRACT

Indonesia's economic growth is closely linked to the performance of transportation and tourism-related service sectors, yet empirical evidence on the short-run dynamic relationship between these sectors and national output remains limited, particularly when multiple transportation modes and accommodation are examined simultaneously. Existing studies often focus on a single transport mode or use annual data, which may overlook short-term dynamics and sectoral interactions. This study addresses this gap by investigating the direction of causality between air, land, and sea transportation, accommodation, and economic growth in Indonesia over the period 2010–2024.

The main objective of this research is to analyze whether transportation subsectors and the accommodation industry act as short-run drivers of Indonesia's economic growth, or whether economic growth itself influences these sectors. Using quarterly real value-added data at constant 2010 prices obtained from Indonesia's national accounts, the study employs a Vector Autoregression (VAR) framework. Granger causality tests are applied to identify predictive relationships, while impulse response functions and variance decomposition are used to examine dynamic responses and the relative contribution of each subsector to fluctuations in GDP. All variables are transformed into log-growth form to ensure stationarity and capture quarter-to-quarter dynamics.

The results reveal a consistent pattern of one-way Granger causality running from air, land, and sea transportation as well as accommodation toward economic growth. Among the four subsectors, land transportation exerts the strongest influence, contributing the largest share to GDP forecast variance. Air and sea transportation and accommodation show smaller but still meaningful effects. Impulse response analysis indicates that shocks from these sectors generate modest and temporary GDP responses, suggesting a supportive rather than dominant role in short-run economic fluctuations. These findings underscore the importance of strengthening multimodal connectivity, logistics efficiency, and tourism-related services to enhance Indonesia's economic resilience and growth.

Keywords: Accommodation, Economic Growth, Granger Causality, Transportation

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