

ABSTRACT

APPLICATION OF PANEL VECTOR AUTOREGRESSIVE (PVAR) MODEL ON THE ANALYSIS OF INFLATION AND GRDP GROWTH RATE OF PROVINCES IN INDONESIA

By

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PVAR is an extension of the VAR model applied to panel data, which combines time series data with cross-section data from various regions. This model allows all variables to influence each other and be analyzed simultaneously as endogenous variables. This study aims to analyze the relationship between inflation and economic growth (GRDP) across provinces in Indonesia using the Panel Vector Autoregressive (PVAR) model. The analysis involves stationarity testing (IPS test), determining the optimal lag length (MMSC), and parameter estimation using the Generalized Method of Moments (GMM). Instrument validity is tested using the Sargan-Hansen test, and causal relationships are examined through the Granger causality test. The findings reveal a bidirectional relationship between inflation and economic growth in several provinces. The constructed model has also been proven to be stable. The Impulse Response Function (IRF) and Forecast Error Variance Decomposition (FEVD) analyses demonstrate how changes in one variable affect the other over time. These results are expected to serve as a valuable reference for formulating more effective regional economic policies.

Keywords: PVAR, GRDP, Inflation, Panel Data, GMM, IRF, FEVD