

## ABSTRACT

*Unequal regional economic growth across provinces in Indonesia has prompted the need for spatial studies. This study uses the Mankiw-Romer-Weil (MRW) Spatial model framework, New Economic Geography (NEG), and agglomeration theory to analyze the influence of economic infrastructure (ports, airports, and internet), human resources, and population growth rates on economic growth in a balanced panel data set of 33 Indonesian provinces for the 2019–2023 period with 165 observations.*

*The estimation method used is the Spatial Durbin Model (SDM) Fixed Effect based on the Hausman test, with two weighting matrix specifications: K Nearest Neighbors (KNN-4) and transportation activity. The best matrix is selected through the Global and Local Moran's I tests as well as the Log-Likelihood, AIC, and BIC criteria.*

*The estimation results determined KNN-4 as the best specification ( $\lambda = 0.2677$ ;  $p < 0.001$ ), confirming positive spatial dependence between provinces. Initial GRDP per capita and population growth rate were found to be significant, providing positive and negative effects, respectively, as predicted by the MRW model. Port infrastructure had a significant negative effect, while airports produced negative spatial effects through a hub-and-spoke mechanism. Internet and human capital did not have significant effects in either mode. Keywords: Spatial Durbin Model, Spatial MRW, New Economic Geography, infrastructure spillover, regional economic growth, panel data, Indonesia.*