

## **A Comprehensive Procedure of Spatial Panel Modelling with R, A Study of Agricultural Productivity Growth of the 38 East Java's Regencies/Municipalities**

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**Abstract :** Spatial panel model is commonly used to specify more complicated behavior of economic agent distributed in space at an individual-spatial unit level. There are several spatial panel models which can be adapted based on certain assumptions. A package called splm in R has several functions, ranging from the estimation procedure, specification tests, and model selection tests. In the absence of prior assumptions, a comprehensive procedure which utilizes the available functions in splm must be formed, which is the objective of this study. In this way, the best specification and model can be fitted based on data. The implementation of the procedure works well. It specifies SARAR-FE as the best model for agricultural productivity growth of the 38 East Java's Regencies/Municipalities.

**Keywords :** spatial panel, specification, splm, agricultural productivity growth

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