

ABSTRACT

Food insecurity remains a strategic issue in Indonesia, as indicated by the high Prevalence of Undernourishment (PoU) in several provinces even though national food production is quite stable. This study aims to analyze the spatial distribution of PoU and examine direct effect and indirect effect from the variables of rice production, GRDP per capita, population, access to proper sanitation, average length of schooling, consumer price index, and Indonesian democracy index to PoU in 34 provinces of Indonesia for the period 2020–2023. This research is based on the theory of entitlement of famine by Amartya Sen who emphasized the importance of availability, access, utilization, and governance stability in addressing food insecurity.

This study uses a quantitative approach with secondary panel data and analytical methods Spatial Durbin Model (SDM) which uses Maximum Likelihood Estimation (MLE). This model is used because it can accommodate spatial relationships between regions and identify indirect effect (spillover effect). Moran's I test shows the presence of positive spatial autocorrelation in PoU, so that the panel spatial approach is relevant. The spatial weights used are K-Nearest Neighbors (KNN) with row-standardized and equipped with diagnostic tests to ensure the validity of the model.

The results of the study show that rice production and GRDP per capita have direct effect significantly negative on PoU, while the consumer price index has direct effect significantly positive. In addition to the direct effect, it was also found indirect effect significant negative impact on Indonesia's democracy index against PoU in neighboring regions, while the consumer price index has indirect effect significantly positive. This finding underscores the importance of area-based interventions and food policies that consider spatial linkages between provinces to more effectively reduce food insecurity disparities.

Keywords: Food Insecurity, Prevalence of Undernourishment, Spatial Durbin Model, Spatial Econometrics, Spillover Effect, Indonesia.

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