MODELING OF MALNUTRITION INFANTS UNDER FIVE (TODDLERS) IN SURABAYA WITH SPATIAL AUTOREGRESSIVE MODEL (SAR)

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ABSTRACT

Malnutrition is a condition status of a lacking nutrients person, or nutrients below the standard. Malnutrition experienced by infants under five years old (toddlers). Surabaya is one of the city that has a case of malnutrition is relatively high. Therefore, malnutrition is one of particular concern by the Surabaya’s government to handle. Spatial regression is one method that aims to determine the relationship between the response variable with the predictor variable with due respect to region or spatial linkages. Therefore, the current research will be used Spatial Autoregressive Model (SAR). SAR method was chosen because it is considered to represent the existing problems of the different characteristics of the effect on malnutrition in Surabaya. Malnourished toddler modeling results and the factors that influence in the city of Surabaya with SAR showed a significant lag in addition to dependencies, also on variable households who have access to clean water ($X_3$), and the ratio of health personnel with the number of toddlers ($X_9$). SAR models produced $R^2$ of 55.26% and the AIC of 77.8996 which is better than the regression method of Ordinary Least Square (OLS) with $R^2$ of 39.57% and the AIC of 83.2002.

Keywords : Malnutrition of Infants Under Five (Toddlers), Moran’s I, Spatial Autoregressive Model (SAR)