ABSTRACT

RESTU ARISANTI. Performance Spatial Regression Models for detecting factors of poverty in East Java Province. Under Direction of AJI HAMIM WIGENA and ANIK DJURAIYDAH.

Poverty is one of the biggest problems in Indonesia. An approach to overcome this problem is to determine the factors that affect poverty usually using ordinary least square regression model (OLS). However, poverty is not only influenced by explanatory variables but also by various aspects related to surrounding locations. Therefore, this research employed spatial regression models, i.e. Spatial Autoregressive Models (SAR), Spatial Error Models (SEM), and Spatial General Models (SGM). Contiguity matrix is as spatial weighting matrix. The model selection criteria are the coefficient of determination ($R^2$), slope regression of dependent variable to its estimator and the value of RMSE (Root Mean Square Error). The results show that SAR is better regression model than OLS and the factors that affect poverty are the percentage of people who did not complete primary school (SD), the percentage of people who drink another kind of water instead of drinking water, and the percentage of people who live in unhealthy houses with floor area at least 8 m$^2$ per capita.

Keywords: Spatial Regression, OLS, GSM, SAR, SEM, Contiguity matrix.