INTISARI

PENANGANAN HETEROGENITAS SPASIAL PADA REGRESI PANEL TERBOBOTI GEOGRAFIS

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Persentase penduduk miskin dapat diartikan sebagai penduduk yang memiliki rata-rata pengeluaran perkapita perbulan dibawah garis kemiskinan. Adapun faktor yang mempengaruhi variabel ini, yaitu usia harapan hidup, rata-rata lama sekolah, tingkat pengangguran terbuka, dan tingkat partisipasi angkatan kerja. Dengan membandingkan performa antara model RPTG, regresi panel FEM, dan regresi linear didapatkan bahwa model RPTG dengan fungsi pembobot kernel fixed exponential memiliki nilai R squared paling besar, residual sum of squares paling kecil, dan AIC terkecil dibandingkan dengan model regresi panel fixed effect model dan model regresi linear. Model RPTG mampu menjelaskan keragaman persentase penduduk miskin sebesar 64.48%, model regresi panel global hanya mampu menjelaskan 50.10%, dan model regresi linear hanya mampu menjelaskan sebesar 37.58%. Sehingga, dapat dikatakan bahwa model RPTG dengan fungsi pembobot kernel fixed exponential lebih baik performanya dibandingkan model regresi panel global fixed effect model dan model regresi linear.

Kata Kunci : Regresi Data Panel, Regresi Linear Berganda, Regresi Panel Terboboti Geografis, Persentase Penduduk Miskin.

ABSTRACT

HANDLING SPATIAL HETEROGENEITY IN GEOGRAPHICALLY WEIGHTED PANEL REGRESSION

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The percentage of the population living in poverty can be defined as the population whose average per capita monthly expenditure falls below the poverty line. The factors influencing this variable include life expectancy, average years of schooling, the open unemployment rate, and the labor force participation rate. By comparing the performance of the RPTG model, fixed-effects panel regression, and linear regression, it was found that the RPTG model with a fixed exponential kernel weighting function has the highest R-squared value, the smallest residual sum of squares, and the lowest AIC compared to the fixed-effect panel regression and linear regression models. The RPTG model is able to explain 64.48% of the variation in the percentage of the population living in poverty, while the fixed-effect panel regression model can only explain 50.10%, and the linear regression model can only explain 37.58%. Therefore, it can be said that the RPTG model with a fixed exponential kernel weighting function performs better than the fixed-effect panel regression model and the linear regression model.

Keywords: Panel Data Regression, Multiple Linear Regression, Geographically Weighted Panel Regression, Percentage of Poor Population.