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THE EXPLORATORY SPATIAL DATA ANALYSIS (ESDA) OF HOUSEHOLD INCOME DISPARITIES IN MALAYSIA

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ABSTRACT

Income inequality remains a critical concern in developing countries, such as Malaysia, where rapid urbanization and regional economic disparities are prevalent. The ESDA offers a powerful framework for exploring spatial trends, identifying clusters, and assessing the relationship between income levels and geographical locations. Perhaps, this study offers the K-Means clustering analysis to give another view of clustering techniques. These methods include choropleth mapping, spatial autocorrelation analysis, and the Local Indicators of Spatial Association (LISA) to examine the spatial autocorrelation of income patterns. Our findings reveal significant spatial disparities in income distribution, with certain regions demonstrating higher concentrations of affluence, whereas others exhibit pockets of economic marginalization. By employing Global Moran's I and Local Moran's I, this study determines the presence of spatial autocorrelation and identify statistically significant clusters of income levels, shedding light on spatial trends and relationships. Moreover, LISA analysis uncovered localized hotspots and cold spots, providing valuable insights into spatial income inequalities and potential drivers of income disparities. Understanding where income disparities exist helps government officials, urban planners, and social organizations design targeted strategies for poverty reduction and regional development.

***K*eywords** Exploratory Spatial Data Analysis · Indicators of Spatial Association · Global Moran's I · Local Moran's I

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