APPLICATION OF SPATIAL REGRESSION IN IDENTIFYING FACTORS AFFECTING LOCAL REVENUE IN WEST JAVA PROVINCE USING THE SPATIAL ERROR MODEL (SEM), GEOGRAPHICALLY WEIGHTED REGRESSION (GWR) AND WEBGIS BASED MAPPING.
(Case Study: Regional Revenues in West Java in 2017)

By : Dian Pratiwi

Department of Statistics of Mathematics and Natural Sciences

Universitas Islam Indonesia

ABSTRACT

Regional income is a very important revenue for the regional government in supporting regional development to finance regional projects and activities. West Java is one of the provinces in Indonesia with the largest regional income, data from Badan Pusat Statistika of West Java Province in 2018 noted that this area has various supporting economic factors such as a population of 48 million people, 398 tourist attractions, 6874 companies engaged in various fields business, as well as 1722 the number of hotels spread across 18 districts and 8 cities. Spatial regression is a statistical method used to determine the relationship between response variables and predictor variables by considering the interrelationships between regions. Based on the results of exploration of the region with the highest regional income in the city of Bandung with a value of 6352 million rupiah. In this study aims to determine the regional income prediction model in West Java using the Spatial Error Model (SEM). This is due to the high inequality in the realization of the Regional Revenue and Expenditure Budget for each city and district in the region. Conclusions obtained The largest regional income is in Tasikmalaya Regency, Sukabumi Regency, Bandung Regency, Garut Regency, Bandung City, Bogor Regency, Bekasi City, Karawang Regency and Bekasi Regency. Seen from the identification of spatial effects on regional income there is a low-high relationship. The most appropriate model in describing regional income in West Java Province is the Geographically Weighted Regression (GWR) Model with an rsquare value of 96.58%. Then the results of the modeling are classified by groups and then create a WebGIS-based map using QGIS cloud.

Keywords: Regional Revenue, West Java, SEM, GWR, WebGIS