ABSTRACT

Crime is a whole form of action that causes psychological and economic damage that is not in accordance with the religious and social norms as well as the law in Indonesia. Socio-economic factors are aspects that explain the conditions of individuals or groups in society, determined by the type of economic activity, education, and income. The socio-economic factors included average school age, population poverty, and unemployment rates in 34 provinces in Indonesia in 2022. The study analyzed the relationship of socio-economic factors to crime rates in Indonesia using the Fuzzy Clusterwise Regression method because of its ability to identify sub-populations not detected by the linear regression method, as well as identifying different patterns of relationships between clusters. The analysis showed the influence of socio-economic factors on crime varies between clusters and the optimum number of cluster is 4 based on the highest weighted coefficient of determination and a non-singular weighted data matrix. Relation On cluster 1,2, and 3 all the variables had a significant influence on the amount of crime, as for cluster 4, the population poverty variable has no significant influence on the crime rate. The coefficient of determination values are 0,9721 for cluster 1, 0,9794 for cluster 2, 0,9799 for cluster 3, and 0,9948 for cluster 4, indicating a very high model accuracy.

Keywords: crime, socio-economic factors, Fuzzy Clusterwise Regression