

## **Cluster Analysis Using Self Organizing Maps (SOM) Method for Grouping Regions with Social Welfare Problems in Riau Province in 2016**

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### **ABSTRACT**

This research takes social welfare problems that occurs in the area of Riau Province. This study is entitled "Cluster Analysis Using the Method of Self Organizing Map (SOM) to Classify Regions with Social Welfare Problems in Riau Province in 2016". The data taken are secondary data on people with social welfare problems (PMKS) in Riau Province in 2016 with 7 variables to be studied, such as namely victims of poverty and natural disasters, psychological social groups, narcotics groups, people with HIV and women with no income, poor people, indigenous communities and prostitutes, target groups, neglected groups, and groups that have limitations. The analytical method used is cluster analysis and mapping techniques. The results of the analysis show that there are 5 clusters of regions with social welfare problems. For the first cluster, dominated by the variables of psychological social groups, group variables of people with limitations, and neglected group variables. The second cluster dominated by group variables of narcotics, people with HIV and women with no income, and group variables of poor people, indigenous communities and prostituted groups. The third cluster dominated by group variables of victims of poverty and natural disasters, group variables of narcotics, people with HIV and women with no income, and variables of the target group. This result can be used as a reference for local governments in prioritizing the resolution of social welfare problems based on regions.

**Keywords:** PMKS, *SOM*, *social welfare*, *cluster analysis*