



Representation in GIS of the Results Obtained by Cluster Analysis in Territorial Profile

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Cluster analysis involves grouping characteristics analyzed by the values of grouping parameters. The statistical cluster analysis uses the method of minimum dispersion of hierarchical tree method, in order to obtain the information necessary to group the administrative units. Territorial profile economic analyses can use the cluster analysis in order to make hierarchical classifications, according to performance, strategies. The hierarchical tree methods consist in identifying certain hierarchies used to take into consideration the units. According to their organization mode, clusters can be: vertically integrated, horizontally integrated, emerging clusters.

With GIS, spatial data clustering can be applied to spatial data to represent the territorial analysis performed. In terms of viewing the results of cluster analysis by GIS, a usual way is to generate cartograms. In this case, a cartogram supposes defining a colors ramp, having a number of colors equal with the number of groups that divide the collectivity.

The parameters used as the basis of the clustering process may exist as independent data or can be stored in the database of an informatic system. As a case study we implemented an ArcMap extension to analyze the clusters by selecting the grouping parameters and by setting the number of groups that will divide the collectivity. Cartograma can be defined taking into consideration multi-level administrative division of the territory. For example, Romania uses the split on villages, counties, regions and macro-regions. Analysis can be applied on different levels of administrative organization by aggregating the values of parameters. For example, the value of a parameter for a county can be obtained by aggregating all parameter values, for all villages, belonging to the county.