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Spatial analysis and site selection post centers using Geographical Information System (Case study: zone 5 & 6 of Isfahan city)

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Extended abstract

1- Introduction

In recent decades, rapid growth of urban population,rural-urban migrations & urban regions natural population growth, made very difficults for big cities & metropolises of our country. Before of this time Cities that had little growth, with very new difficults faced. One of the Maine needs of urban populations is fine access to urban sevices. Accabilitiy is one of the Maine characterizes of a good city and can divide to diver shape of access such as activities, goods, resources and services.

2- Methodology

Primary, Effective alternatives of post center site selection converted for information layer with shape file format.

In next stage, best buffer for any layers determined and for each considered range weigth between 1(lowest value) & 5(higthest value). Because the entire information layer that used isn't equall effect in post center site selection and because to be many Layers, compare & determine value of each seems very difficult, so AHP technique used for weigthing and combaine layers. The export of this stage is land zoning for locating post centers in 5 ranges with amount of goodness: very much, much, mediane, low & very low. So, in order to determining poor regions, network analysis tools in GIS environment used and 750 meters of standard buffer access for exist centers designed and with period rank planning, the best sites for construction post centers in 3 periods(low, mediane & long) determined.

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3- Discussion

In case study (zone 5 & 6 of Isfahan city), that 5 post services center exist, bad spatial distribution & locating near of the maine roads, created very difficults for settelers for access to this services. So in this research primary effective factor in post center site selection distincted that involved information layer such as radiant access, access to roads, nearest to attractive centers such as: educations, military, cultural, religious centers, center of regions and far from exists post centers. So using analytical hierarchy process technique compared these layers and for each layers one weigth in base amount of important considered. That far from exist post center gained highest value and radiant access of each center post gained lowest value. Then weigthed sub alternatives form each aleternatives for amount of importance using analytical hierarchy process technique. The weigths that gaind for each alternative and sub alternative used in stage of combining in GIS environment and finaly leveling of area surving for amount of goodness achived in order construction new post centers. Because the goal of research is construction post center ranking, so with attention to amount of lands goodness, with considering 750 meters access buffer, new post centers in 3 period (low, mediane, high times) porposed.

4- Conclusion

Results of this research shows that exist post centers in zons 5&6 of Isfahan city, haven't good distribution and don't considered exist alternatives for post centers site selection in their locating and exist center instead locating in center of neighborhoods & zones of city and corporate with other land uses, located near the maine roads that this forther more condemn extera finances for citizens, caused more attract people to near of this roads and created terafic challenges. So in order to doing exist standards with determine buffers with750 meters for each center, in one term with low, mediane & long periods, oltimately 10 new post center in optimal sites porposed that in low period 2 center, median period 3 center and finaly in long period 5 new post center porposed.

Key words: spatial analysis, site selection, geographical information system, post centers, Isfahan.

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