Determining the developmental level of Nain city in Esfahan province

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Extended abstract

1-Introduction

Development is a process of society's changes from the initial conditions of backwardness and under development through more or less the same evolutionary by tolerate the quantitative and qualitative changes. (Nassiri 2000:108). Experts have different interpretation of the term development, for example increase production and efficiency, improvement the level and quality of life, improvement in health services, solving the problems, unemployment and inflation, providing economic-social needs, enjoy the education and culture and active participation in different areas (todaro,1378:23).

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Fundamentally development is a change of a civilization to another civilization or in other words is a transition of an old thought to the thought of new society. Because of this reason experts knew development enclosed to die and birth. The death of a thought and a system elegant to old system and birth of a thought and a system elegant to new system (azimi1377, 13-15) is a definition Usually development means that a person in which capabilities or potential abilities of an object or organism realized then changes to its natural state and become complete (zaks, 1377, 16-17). Rapid urbanization, spatially in large cities cause to some issues such as unbalanced distribution, inadequacy services and facilities, obvious differences in the value of land and house, living condition and finally make social and economic divide and separate switching. This biological, social and economic condition can be seen in population characteristics users' percentage, statistic centers facilities and services in urban areas.

The last strategy for this problem in the last decays is called sustainable development arises from growth and development in global, regional and local level that introduces by United Nations. In this strategy each today or future needs should be eliminated. The characteristic of this kind of development in cities level are equivalence between and within the generation, environment protection, minimum use of non renewable recourses, permanent economic and variety of self reliance of society, self welfare, elimination of basic needs of people, obtaining a desirable urban environment in the social, economic, cultural and physical dimensions with regard to economic, social and cultural country resources, enjoyment of extravagance and wasting in using of limited and sometimes rare resources(urban development indicators, 1370:1).unreasonable and inappropriate focus on the biological aspect of economic- social development leads to in equality in the geographical areas. The theme that can see it's reflect on the geographical perspective and uneven growth (Friedman, 1375:433)

2- Methodology

A numerical taxonomic method is a way of country, regains or different activities ranking and comparison according to the degree of development or enjoyment of them from facilities. So that by combination of number of related indicators with survived indicator, can prior the studied choices. Using this method can be determined the degree of development and ranking the cities and

also determine the coefficient of dispersion. In this way after preparation of the original data matrix, according to the various indicators may have different sales, it is necessary the indicators loose the scale and its heterogeneity, by standardize, and forming the standard data matrix (z). (Batyavry, 17.2004). Then the largest quantity in each standard matrix column selected as ideal quantity. after this the composite distance each local calculated from ideal one that actually represented the local distance (I) to ideal part (o) (the same resource.18)

By calculating the average degree of cities development and coefficient of dispersion can obtain the coefficient of inequality in a relation in which development degree of standard deviation to their average calculated .the more the coefficient the inequality increased.(habibi et al,89.1378). This research is applied research and the way of survived is analytical description.

3-discussion

In this regard, statistic and information related to 30 indicesindices based on population and housing census in 1385 and1389 statistical yearbook is collected and used. Unfortunately, because of the lack of adequate information is left out some important indicators. Indicators used in this study are as follows: (a) institutional indicators, physical. B: indicators of health - health. c: The cultural indicators.

To appreciate n region (17 cities in Isfahan province) each with n index (30 indicators) are being considered. Then the

mean and standard deviation of all the indices are calculated for cities.

Thus each members of matrix lead to different indicesindices that has not the same unit, the scale of different indices should eliminate. In this stage formation the related of standardize matrix to equal and omit the different scale of measurement done. Thus the number related to each index from total average of the same index and between studied pointes is deducted and divided to the same standard deviation of each studies housing. (Momeni, 1377, 28). With a mean and standard deviation of each column of the matrix Y, we form the matrix Z:

So the largest values of each column are ideal. The features of the standard data matrix are 1-the scales of the indices become the same and the average and deviation become zero.

The next stage in taxonomic method is calculating the composed distances between regions. Having standard matrix calculated the distance of each city with other cities by using the composed distances formula. To illustrate the concept using Euclidean distance between the two views:

$$D_{ab} = \sqrt{\sum_{j=1}^{n}(Z_{aj} - Z_{bj})^2}$$

In this formula a and b represent of two regions Dab represent the distance between two regions. From the above formula can be resulted:

Each region distance a from b is equal the distance b from a.

Each region distance from itself equal zero.

The distance region a from b is equal or less than the distance region b from a plus c from b.

This is a symmetric square matrix n.m that its diameter equal zero. This matrix represents the distance of each region from other regions. So the lowest mean and standard deviation are calculated.

Calculate the confidence interval

Here the minimum distance column that formed in the last chart calculated with regard to the mean and standard deviation of this column.

First from the last column (minimum distance) calculate the mean and the standard deviation and also two parameters +and – then calculate the mean and the standard deviation. The interval between + and - call diversion.

The region development determination

In this stage the distance from the ideal value of each of the areas to be determined. Less distance from ideal represent a development and Far less than ideal represents a lack of development. The highest value of each column as the optimal choice selected. The element of each column decreases from the highest quantity and then 2nd squared. This action done for each column .Total rows in this matrix is calculated and then takes the square root.

In forth matrix the ideal quantity that gains from standard matrix subtracted from each indices in this matrix and then all of them powered. So the sum of them calculated and finally takes the square root.

The final ranking of cities

At this stage after determining the development models for each the

locations the developmental degree are calculated that is between zero and one. Is much closer to zero indicates the development and is much closer to a one, lack of development. Finally the best showing of cities condition in terms of quality and quantity all indicesindices compare in three levels. As you can see in

above table the minimum quantity related to Esfahan that is (.1) and is close to zero and represent development. Ferydoonshahr is about

(.71) and represent lack of development. The other Esfahan cities are closed in terms of development indices.

Development possession of each city

Cities point		Development condition	ranking	row
number	name			
1	Esfahan	Relatively developmental	$0 < X \leq .5$	1
15	Other cities	developing	$.5 < X \leq .07$	2
1	ferydoonshahr	Lack of development	$.07 < X$	3

4-Conclusion

The purpose of this study is to analyze the Nain's development in Esfahan province. according to calculations done by using the numerical taxonomic method Esfahan is in the condition of development, the cities Ardestan, Teran, Chadegan, Khomanishahr, Dehagan, Semirom, Shahreza, Falavargan, Kashan, Golpayegan, Mobarake, Nagafabad, Natanz, are relatively development and Ferydoonshahr is low developed. Here Kashan is better and the citi of Nain is developing. Cities in Esfahan in different periods have different field of development that represent not coordinate development in cities consistent to populations need. This disparity is due to natural factors, economic, political, planning system failure and ideal growth. Esfahan for central office, political and ideal growth in all indices remains better. And attract facilities, services, skillful human recourse from surrounded cities and province and cause central economic,

politic, and population. This trend is still continuing. Nain city progresses to some extent in despite of establishment of different factories, attention of authorities to cities services, flourished budget left in few last years. But still is in developing level and in recent decays for compensating lack of development, need more time and budget from authorities. In the part of natural and physical indices Nain is in relatively good condition. This is because of investing of governmental and privet part. In health indices, although the city from having doctors is in good condition but, because of short destination that has with other cities, most of the diseased go to centers that are a reason for lack of development in the field of health indices. With regard to the investing of government in industrial part Nain is poor in cultural indices that need more attention of authorities and more flourished budget.

Key word: level of development, development indicators, naein, taxonomi

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