# Analysis of urban management impact in physical development (Case study: regions 2, 3 and 4 in Zabol)

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***Abstract***

*City and urban management are concepts that have a very close relation to each other. The rule of law is needed to establish the field of the interaction between the elements of urban management which includes citizens, institutions and the city administration, the Islamic Consultative and private sector. The purpose of the macro-management of urban is creating a livable environment for all with social justice, economic efficiency and environmental sustainability and urban management is integrated in the areas of urban land and housing, social services and economic development and environmental infrastructure. The purpose of this article is analysis of urban management impact in physical development (case study: regions 2, 3 and 4 in Zabol). In present study, the research method is descriptive-analytic based on library and field studies as questionnaire that collected data is analyzed by using the ELECTRE-TRI model. In this research, regions 2, 3 and 4 among five regions in Zabol have been studied based on the four indices of urban management role in physical development. The results show that the region 2 is placed in first rank, the region 3 in second rank and the region 1 is placed in third rank.*

***Keywords:*** *Urban management, Sustainable development, Physical development*

## Introduction

The rapid pace of population growth and migration to urban areas is a key feature of developing countries. In Iran, uncontrolled immigration from rural to urban has been followed by numerous problems for urban management and has transformed the physical face of urban space and Municipal performance can have an important role in organizing of affairs. Urban society with all its diversity issues is full of problems that its social roots seem being stronger than other dimensions. Many of the social damage are formed in the cities and because of the population density, Most of them are invisible (Sarfai and Abdullahi, 2008: 217). The city is proposed as a source of developing and urban management position is very important and crucial in the development and improvement of urban settlements. From another perspective, we can consider urban management in the course of a lawful and sustainable development. This case will be more important when the way of managing the optimal flow of city life can have the most important role to improve human settlements and sustainable urban development because the factor of allow the donor and regulator of urban plans will stem from urban management efficiency (Shia, 2003:12).

Visual structure of each city, although it is the most superficial formed layer and the most common involved area of activity-spatial structure apparently but on the other hand, it is the most visible aspect of manifestation of economic, political, social and cultural relations ruling on community residing in the city that it will emanate the existing contractions or conflicts and organizing or chaos in society in a tangible form to the eyes of those involved in urban management. So the irregularities and anomalies reflected on the body of each city is an indication of the chaos in the city's development process and management system failures and this physical abnormality, in turn, can sustain or alleviate the existing shortcomings in the activity system or it may create new activities anomalies. So, In order to explore the visual characteristics of the physical-spatial structure of the city and the effort to organize it, will be the most important aspects of monitoring of urban development (Abdulla Khan Gorji, 2003: 1). So the efficient functioning of urban management as a comprehensive management entity involved in the urban issues and high broad and diverse phenomena is essential and made it possible to achieve sustainable human development in the city eventually.

Evaluating the performance and efficiency as one of the most effective tools for understanding organizational capabilities and business process control can highlight the threats, strengths and opportunities for improvement on existing trends and provide individual and organizational excellence (Mohammadi et al, 2007: 124).

## Theoretical Foundations

### City

Although still in the Third World people live in rural areas, but city was the center of the many developments that have occurred in colonial period and especially after. According to ecology, the existence of cities belongs to the second food production. In this period of time rich cities are growing in number in rich areas. Urban communities are growth and more facilitate. So production is increased in the cities. Transactions occur between the cities, life is more extensive and comfort coupled with the vast social network. Then the man went into the field of urban communities and creates new areas of a Word. Devices may be replaced by a machine instead of simple tools and period of machinery in production begins. Cities become a closed Center and habitats of community elders and social organizations are transmitted to the cities from the villages. City Especially big city is an unquiet community that large groups gathered in mass, and because of a variety of complex social organizations, especially official organizations they are cooperating together. City dwellers usually have an official or private relation with each other. Among city dwellers, there are fundamental differences in terms of jobs and expertise. Despite cities have in common about qualities but they are not all of one type, many cities by the time spent, have been named in terms of certain specialties. So cities can be divided into different groups such as trade center city, industrial city, cultural city, realigned city, political city, cultural city, sportive city and so on (Ahmad Romory, 2008, p 9).

### The concept of development and sustainable development

The development is an idea and practice that emerged in the early of nineteenth century. This concept is different from the idea of progress. Following dissatisfaction with the progress in the age of Western thought of melancholy, positivism, idealism and critical, the theory of development accompanied by the first capitalist theory based on reasoned Mandate (Instead of another act) has created a strong force in forming of the theory of development and mandate is an intention that will be expressed with a source of empowerment for the development of other capacities (Cowen & Shenton, 1996: 1).

The concept of sustainable development centered on the axis of human- environment and considers the development of economic opportunity with environmental considerations and social justice. The Sustainable development was propounded after the created problem from purely economic development after world war two. A place where excessive development has caused the class differences and the numerous environmental problems and the path of development had valuated the social-environmental dimensions less than economic. This concept has roots in an ecological principle, based on this principle if in any environment; the size of the natural power of environment processing is equal to Utilization or productivity, the main Capital (ecological resources) will remain stable and our use of the environment as it can be produced, will always be stable. The amount of the human use in the certain environment which is appropriate to the powers and capacities of environment has the maximum efficiency due to the fact that it is equal to the size of the entire production (Makhdom, 1999: 54).

Attention to the physical development of cities is one of the most important factors in the planned growth of cities. In our country as long as the pattern of urban growth was organic and endogenous and local factors were determinants of urban growth, urban lands was sufficient for urban traditional use and it organized the space of city organically according to the economic, social and security condition of the city. But today, due to exogenous forces and peoples' immigration to cities, the physical development has been propounded as one of the most important factors in program-planning of cities. On the other hand, although urban areas form 4 percent of the land surface of the earth however, they can cause abnormal development of extensive changes in the environmental conditions of other applications. Irregular urban development will have devastating effects on cities and their surroundings Such as heterogeneity of natural landscapes and the loss of farmland. Despite the fact that scientific findings have proven that this pattern is not an effective model for urban development but it is still the dominant pattern of urban development (Batisani & Yarnal, 2008: 2).

### Urban management system

Urban management is as a system. To understanding of urban management, it can be likened to a system. Urban management like all systems is included of departments and affiliate agency or organizations, which have mutual relations together in form of unique structure. This relationship may be weak or strong.
Since there are large number of individuals, hierarchical and accurate division structure of labor; urban management system in the term of systems classification is in the social systems category. The important part of this system is financial sector which is the most important issues of urban management system.

**Urban management tasks**

The main tasks of urban management can be noted as urban managing and land ownership. In the next few years, most developing countries are going to face land shortages, runaway inflation, market problems and economic and environmental problems; urban management task in this area is solving these problems . Another task of urban management can be made economic and social development balance .In Iran, in accordance with Chapter 11 of the Municipal Act four general tasks which are assigned for municipals are construction, services, regulatory and social welfare. Developmental tasks are such as street construction and landscaping, service tasks are such as clean streets and waste disposal, regulatory functions are such as licensing and supervision of building and trade unions, social welfare are such established hospice and construction of affordable housing.

**Area of study**

Zabol is located the geographical coordinates 31 degrees north latitude and 61 degrees and 2 minutes and 39 minutes east. The extent of Zabol is 2084 hectares, which is equal to 0.13 percent of the area encompasses the city. Zabol in term of land distance is 210 km from Zahedan city in southeastern, 1538 km north of Tehran, 366 km North West of Birjand and 834 km from Mashhad and thus be associated with the centers of neighboring provinces and other parts.

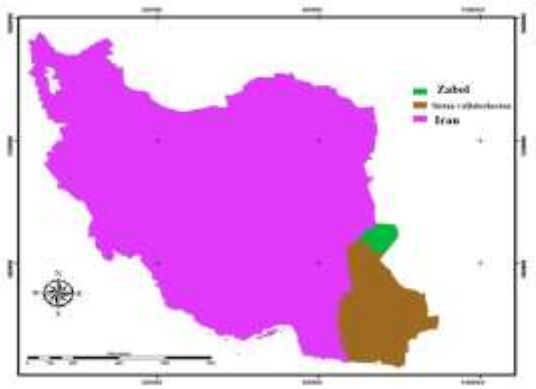


Figure (1); position in the region, Sistan-Baluchistan province

**The divisions Pattern of the city of Zabol**

According to the detailed design proposal, the city of Zabol has been divided into 5 regions and 38 districts. The region 1 has 7 districts, the region 2, 12 districts, each of the regions 3 and 4 has 7 districts and the region 5 has 7 districts.

**Research Methodology**

In present study, the research method is descriptive-analytic based on library and field studies as questionnaire that collected data is analyzed by using the ELECTRE-TRI model.

**Introducing the ELECTRE-TRI model**

Model ELECTRE - TRI-family component is a multi-criteria approach. ELECTRE to rank that was first introduced in the 1992 Yu was developed in the later years. This method captures off options categorized according to multiple criteria decision making predetermined intervals, classifies. As a result of this classification to compare each item of profiles that are indicative of the boundary layers, can be obtained.

**Discussion and conclusion**

Criteria physical development of urban management in the city of Zabol

- The situation of the residential units
- The situation of the network of passages and communication network
- The situation of urban green space
- The situation of urban density and per capita

In this model it is assumed that the utility of each indicator is monotonically increasing or decreasing. Problem with this approach, which involves the seven steps in the next section we will refer to these steps.
Table (1) matrix evaluation and decision criteria assessed in the study areas in Zabol ELECTRE model shows.

Table (1): Matrix evaluation and decision-making criteria used

| The situation of urban density and per capita | The situation of urban green space | The situation of the network of passages and communication network | The situation of the residential units | Indicators Districts |
|---|---|---|---|---|
| Average | Average | Low | Low | District 2 |
| much | Average | Average | Average | District 3 |
| Average | Low | Low | **Low** | District 4 |

Source: research findings

Our standard every 4 criteria are qualitative. Quality criteria for very low, low, medium, high, very high and the "positive" were considered. Then convert qualitative and quantitative indicators to assess and decide on their placement in the matrix of the "dipole distance scale" are used, which are as follows:

Table (2): Table Rating Likert scale

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| | Very Low | | Low | | Average | | much | | Very much | |

Source: research findings

This scale is based on qualitative criteria measured were converted to quantitative criteria that results in a table (3) is reflected.

Table (3): Matrix evaluation and decision-making (numerical)

| The situation of urban density and per capita | The situation of urban green space | The situation of the network of passages and communication network | The situation of the residential units | Indicators Districts |
|---|---|---|---|---|
| 5 | 5 | 3 | 3 | District 2 |
| 7 | 5 | 5 | 5 | District 3 |
| 5 | 3 | 3 | 3 | District 4 |

Source: research findings

Obtained after a decision matrix table (Table 3), and the various steps ELECTRE method was performed as follows:

**Step one: Normalizing of Decision Matrix (N)**

There are several methods of Normalizing the Decision Matrix, which is one of the methods of Normalizing vector.

Table (4): be Scale of evaluation and decision-making matrix bit with the Norm

| C4 | C3 | C2 | C1 | Indicators Districts |
|---|---|---|---|---|
| 1/16 | 1/74 | 2/81 | 2/21 | A1 |
| 3/55 | 0/98 | 1/01 | 1/41 | A2 |
| 0/29 | 0/98 | 1/80 | 3/19 | A3 |

Source: research findings

Normalizing this type of decision-making matrix element squared sum of the squares of each column is divided. In this way, all the columns of the decision matrix are the same units and can easily compare them together.

Equation (1)

$$n_{ij} = \frac{a_{ij}}{\sqrt{\sum_{i=1}^{n} a^2{}_{ij}}}$$

**The two, step is to obtain the amorphous matrix weighted scale (V):**

For this purpose we use the method of entropy weight parameters using this method to equation (2) and Table (5) to obtain:

Table (5): Matrix weighted be Scale (V)

| C4 | C3 | C2 | C1 | Indicators Districts |
|---|---|---|---|---|
| 0/03 | 0/07 | 0/01 | 0/08 | A1 |
| 0/01 | 0/04 | 0/04 | 0/05 | A2 |
| 0/09 | 0/04 | 0/08 | 0/01 | A3 |

Source: research findings

Equation (2)

$$P_{ij} = \frac{aij}{\sum_{i=1}^{n} a_{ij}}$$

Table (6): Continue to Step Two: To obtain a weighted be Scale Matrix (V)

| C4 | C3 | C2 | C1 | Indicators Districts |
|---|---|---|---|---|
| 0/50 | 0/50 | 0/23 | 0/23 | Ej |
| 0/63 | 0/50 | 0/50 | 0/50 | Dj |
| 0/50 | 0/23 | 0/23 | 0/23 | Wj |

Source: research findings

To obtain the value of k from equation (3) is used:

Equation (3)

$$k = \frac{1}{\ln(m)} = \frac{1}{\ln 3} = 0/91$$

Equation (4)

$$d_j = 1 - E_j$$

Equation (5)

$$w_j = \frac{d_j}{\sum_{j=1}^{n} dj}$$

The weighted version of the Scale Matrix can be acquired, in order to scale the amorphous matrix square matrix (wn * n) the main diagonal elements of the weights of indicators and other elements is zero, we multiply. In this matrix, the matrix is called a weighted version of Scale (V). The following equation is obtained:

Equation (6)

$$V = N \times w_{n \times n}$$

**Step three to seven**: set of coordinated and uncoordinated

At this point, all options should be evaluated with respect to all indices. The matrix is composed of a set of coordinated and uncoordinated. Harmonized set of indicators which include an option another option is desirable. To find the utility must decide on the type of index terms having positive and negative attention. This matrix is calculated by the following equation:

Equation (7)

$$I_{kl} = \sum w_j, j \in S_{kl}$$

$S_{KL}$ criterion a measure of the relative importance of $S_{K\ compared}$ to $S_L$. This measure is a numerical value between zero and one, and everything indicates that this value $S_K$ is greater than the $S_L$ is more preferred, and vice versa.

The next step is to determine the heterogeneity of the matrix based on the matrix V is obtained using the following formula:

Equation (8)

$$NI_{kl} = \frac{\max \left| v_{kj} - v_{lj} \right|, j \in D_{kl}}{\max \left| v_{kj} - v_{lj} \right|, j \in \sum A}$$

The continuous criterion, K and I set the whole discrepancy indices to measure. Then create an effective matrix H should first set a threshold and if each element of the matrix is greater or equal to i, the elements of the matrix H, takes on a value of zero is otherwise.

Equations (9)

$$I = \frac{\textbf{Total of Harmonic Matrix Values}}{\textbf{Number of Harmonic Matrix Values}}$$

According to the obtained threshold values in the Harmonic matrix of the effective coordination number is greater than zero; it will be a smaller amount. According to the obtained threshold values in the matrix of the effective coordination number is greater than zero; it will be a smaller amount.

Matrix composition and matrix inconsistent with the efficient coordination of the overall matrix is achieved and the resulting matrix to prioritize the chorus options is:

Table (6): determine priority Districts based on the studied indicators

| Priority | The situation of urban density and per capita | The situation of urban green space | The situation of the network of passages and communication network | The situation of the residential units | Indicators Districts |
|---|---|---|---|---|---|
| 2 | 2 | 2 | 2 | 2 | District 2 |
| 1 | 1 | 1 | 1 | 1 | District 3 |
| 3 | 3 | 3 | 2 | 3 | District 4 |

Source: research findings

The results show that the region 2 is placed in first rank, the region 3 in second rank and the region 1 is placed in third rank.

## Conclusion

Cities have different body and functions as residential centers. The formation of the physical elements in cities and their multiple roles will be done by social and political players of the cities. But the administration of the city and deal with the demands and expectations of the citizens requires a context that under its light, it can be the responded to such demands reasonably.

Desirable management means to investigate the problems of planning, monitoring coordination of the different parts and how to provide and implement the projects and the public needs that deal with it from prenatal until death. In other words, management must try in direction of all the executive ways that the residing people of the city are contacted with and it must implement the affairs correctly and dispose the problems and meet the needs. The purpose of this article is analysis of urban management impact in physical development (case study: regions 2, 3 and 4 in Zabol). In present study, the research method is descriptive-analytic based on library and field studies as questionnaire that collected data is analyzed by using the ELECTRE-TRI model. In this research, regions 2, 3 and 4 among five regions in Zabol have been studied based on the four indices of urban management role in physical development. The results show that the region 2 is placed in first rank, the region 3 in second rank and the region 1 is placed in third rank.

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