

## Evaluation and analysis of the role of urban planners and managers in sustainable urban development (Case study: The cities in Sistan region)

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**ABSTRACT:** *Cities have different structures and functions as the centers of dwellings. The formation of skeletal elements in multiple cities is conducted by political and social players of country but it does need some contexts and background to administrate the city and meet expectations of citizen's need which depended on them to be able to give a reasonable answer to them. City and urban management are concepts which are very close to each other. Establishing the necessary conditions and backgrounds for urban holistic development will not provided without full interaction between elements of urban management, including urban planners, city managers, citizens, institutions and the city administration, council and private sector. So the goal of this paper is the evaluation and analysis of the role of urban planners and managers in sustainable urban development (Case Study: Cities in Sistan region). The research method is descriptive-analytic and is based on library studies. The results of multi-criteria classification of Electre-TRI show that based on the studied criteria, Zabol is in first place and the city of Dost Mohammad is in the second place and finally the city of Zahak is in the last place.*

**KEY WORDS:** *Urban management, urban planning, sustainable development, Sistan*

### I. INTRODUCTION

The city is the economic and social phenomenon basically which has been shaped and developed by the influence of various factors and forces. People aggregate together in a limited and dense area to live and work and communicate and create the city gradually. So cities like living creatures, is always becomes larger physically and more complicated structurally. The increasing value and importance of the role of citizens in administrating a democratic system of governance and society has attended the idea of public participation in affairs of society. According to the movements of democracy and democratic governance of societies, the right of people to their fate is accepted by popularity and their lack of participation has led to the creation of large losses (Habibi, 2002, 12).

It is certain that strategy is not enough by itself but, it is the implementation and monitoring of strategies that drive the organization. Experience has shown that it has not been because of weakness of the strategy that most organizations have failed, but it has been due to not implementing or weak implementing of strategies. If strategies been designed correctly but not appropriate to the processes and activities of the organization then, the operational managers and in another words, the executive bodies will be away from each other and as a result, divergence between the performance and strategies will occur. Establishing of a performance evaluation system will minimize the risk of this divergence and prevent from the waste of time and resources of organization (Alavimatin and et al, 2009, 191).

But nowadays, the roles of managers in urban management have changed in the world fundamentally. Cities are

managed to provide welfare and comfort of their residents. Urban management has large structures and has an important role in the success of the programs and projects of urban development and the needs of the flow of traffic in the city, public welfare, housing, land use, recreation, culture, economy, infrastructure and etc (Shaia, 2003: 47).

The purpose of the role of managers in urban management is improving of the working and living conditions of the population living in a different socio-economic strata and groups and protect the rights of citizens, to encourage sustainable economic and social development and protection of environments (Saedinia, 2000:46). Urban management must plan for the city, organize the urban activities, and monitor conducted activities and even create motivation for optimal performance of affairs. Performances of such cases are returned to knowledge of principles of management, planning, communication, motivation, organization, leadership and control (Saedinia, 2000: 20).

Today, the managers know the measuring of the performance of their organization as an inevitable fact to achieve its strategic goals. They believe that their improvement and the growth of their performance depend on performance measurement system which controls all components of the organization and shows the deviation of the component from those that are in line with the strategy. Performance management is an approach that it will be possible to achieve many of these objectives by using it. Performance management is a process based on a series of activities and is built in such a way that through continuous improvement of people and groups will lead the organization to organizational effectiveness and Improvement of strategic focusing.

In our country, after two decades of interruption, in October of 1998, the people had the chance to participate in free elections for the election of members of city councils, town and village for the first time. Welcoming millions of Iranians of this historic event is a sign of their long-standing interest in participation in politics and public services and it is hoped that the council elected by the people with knowledge about their heavy duty, will try to improve the economic and social wellbeing of the local community and the development of towns and villages. Sustainable development model as the common modeling approach of development, knows the development as the world modernization according to Western demands and ways (Baker, 2006, 1). From 1980s onwards the concept of sustainable development has been as a fundamental concept in the World Conservation Strategy of the United Nations and in Report of Brantland, the report of Brandland (1983) defines the sustainable development as a development which meets the needs of present generation without compromising those of future generations (WCED, 1987, 43). It contains 2 original concepts. A) Needs, especially the basic needs of poor people who need to be given higher priority. B) Restrictions, restrictions are to protect environmental resources for future generations in the frame of use of adaptive technology (Purvis & Grainger, 2004, 6). Sustainable city should be planned in a way that by the efficient utilization of resources provides fair choice and benefit from the environment for residents; it is the approach of the development of sustainable city that leads the urban planning process to this direction.

### **The history of the research**

In 2009, Alavimatin and et al did a research entitled, performance Evaluation of Islamic council of Tabriz and its role in the implementation of municipal projects (case study: reconstructive projects of Tabriz Municipality), and concluded that based on Article VII of the Constitution, Islamic councils should have continuous monitoring on the performance of municipalities and on reconstructive projects.

In 2007, Azarbaijani and Dariai did a research entitled, impact of city councils on the effectiveness of municipalities (case study: Islamic council and Municipality of city of Abada), and concluded that in the prospective of employees, there is no significant difference in the effectiveness of the municipality before and after the establishment of the Council, however the elected mayor by council have been weaker than before ones. In prospective of citizens, there is a meaningful difference in the effectiveness of the municipality before and after the forming of the council while there is not a meaningful difference in electing of mayor.

In July of 2002, Habibi has done a research at faculty of law and political science at Tehran University entitled, the performance of the first Islamic council of Tehran, the main hypothesis of this thesis is that the most important element for electing members of the City Council of Tehran is political affiliation and orientation not the experience and administrative efficiency. And if the council neglect this important, it will lead to the ultimate failure of the Council.

In 2012, Ziari and et al have done a research entitled, Study and identify fiscal resources and presenting of ways to improve the sustainability of resources and income of municipalities, the municipality of the city of Mahabad, and concluded that Municipality of Mahabad faces to some problems in many aspects that its origin goes back to the lack of mechanisms and strategies for sustainable income. Finally, due to problems in the municipality, some strategies have been suggested for sustainable income of the municipality.

In 1967, Zahedi has done a research to get a master's degree with guidance of Niamey, at Faculty of Business Administration and Management in Tehran University entitled, Tehran City Council and its role in municipal affairs. In this study, the researcher has stated duties of the City Council and its relationship with the municipality and related problems.

## Theories

### 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 it (Smith, 2000). 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 (Romory, 2008, 9).

### 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.

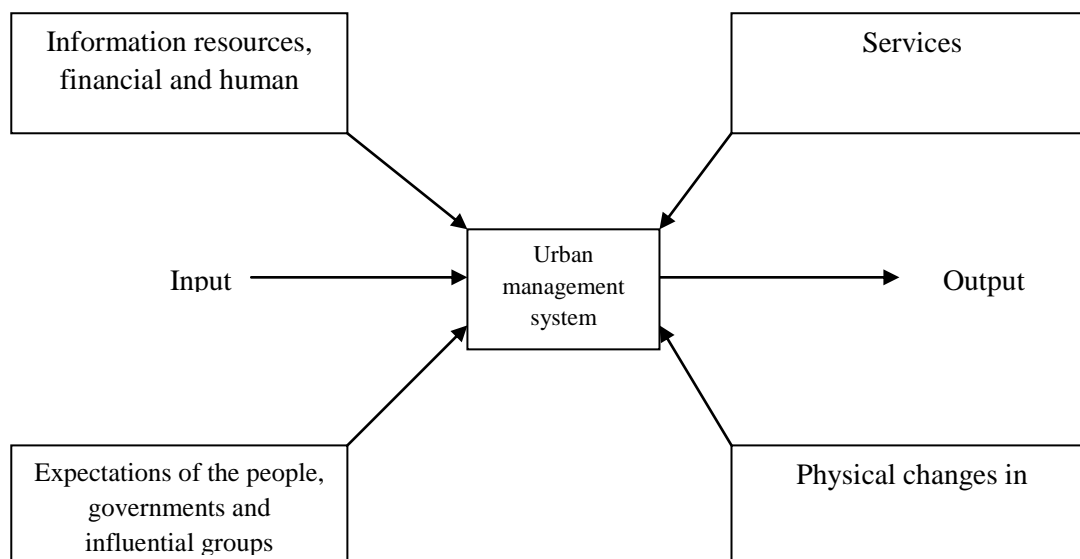


Figure (1): Input and output in an urban system, Source: S. Ahmadnia, p 29

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.

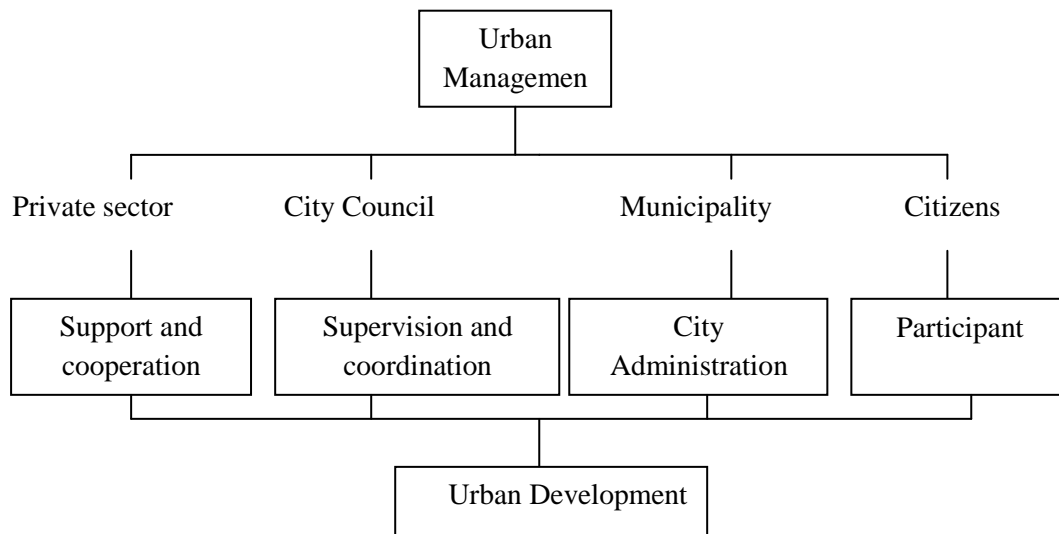


Figure (2): The Role of Urban Management

### The concept of the development and sustainable development

Development is an idea that emerged from the early of nineteenth century. This concept is different from the idea of progress. Accompanying of development theory with first capitalism based on Mandate idea (Act instead of other), a strong force for creating the idea of development was created following dissatisfaction with the progress taking place in Western thought era of positivists, idealism and critical ideas. Mandate is stated as an intention which is to develop the sources of others by using of powerful factors (Cowen & Shenton, 1996, 1).

In sustainable development, the human is focused and humans deserve a life coupled with health and construction in harmony with nature. In this orientation, the balance principle between the demands of economic, social and ecological of each generation according to the share of the earth's limited resources are urban policies and urban settlements layout (Amakchi, 2004: 1). So the concept of sustainable development has an extended meaning which covers all aspects of human life, and policies on economic, trade, technology, natural resources, education, health and industry and etc have designed and planned in such a way that continue the socio-economic development and environmental development (Moahed, 2000, 4).

### Area of study

Sistan region with an area of 15,197 sq km in the geographic range between 30 ° C and 5 minutes to 31 degrees 28 minutes latitude and 60 degrees 15 minutes to 61 degrees 50 minutes longitude in southeastern Iran and the northern part of the province and Balochistan by about one eighth of the total area allocated to the province. Average annual rainfall in the region 6/59 mm, mean annual temperature of 22 ° C and the average annual relative humidity is 38 Drsdm. One of the hallmarks of the region, which winds 120 days in the mountains between Afghanistan and plain air pressure, occurs. The wind almost from early June starting at about 4 months of the year continues in Zabol plain and almost September (late August) is terminated.

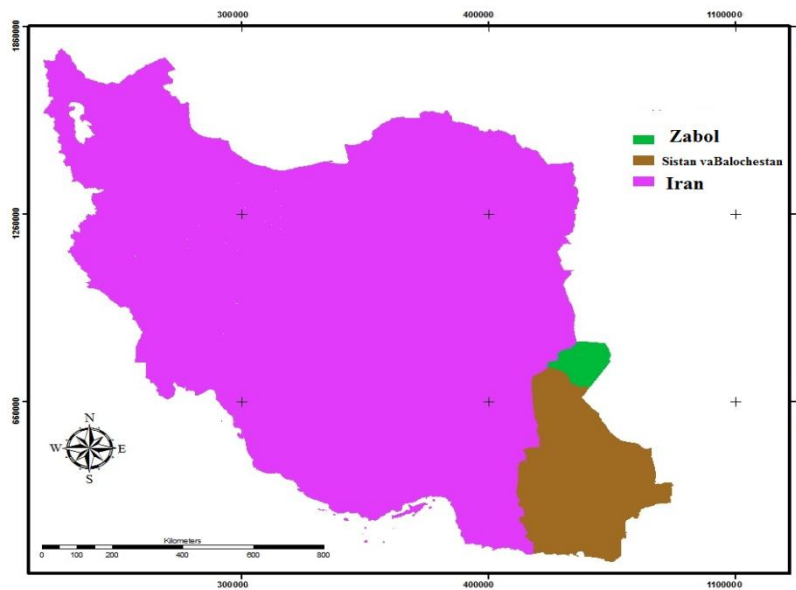


Figure (3): position in the region, Sistan-Baluchistan province Source: search results

**Discussion and Conclusion**

Using of ELECTRE model for evaluation and analysis of the role of urban planners and managers in sustainable urban development (Case Study: Cities in Sistan region).

**Sustainability criteria are:**

- \* Social dimensions
- \* Economic dimensions
- \* Cultural dimensions
- \* Environmental dimensions

In this model it is assumed that desirability of each index is steadily increasing or decreasing. The problem solving with this method involves the following 7 steps which we will refer to this process in the next section. Table 1 shows the Matrix of evaluation and decision-making criteria, evaluated by ELECTRE model in cities of the province of Sistan.

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

Environmental dimensions	Cultural dimensions	Economic dimensions	Social dimensions	Indicators Cities
average	Low	Low	Low	Zahak
much	average	average	average	Zabol
average	average	Low	Low	Dost Mohammad

Source: search results

Our criteria, all 4 of the criteria are qualitative. Qualitative criteria are: very low, low, medium, high, very high, and were considered as the "positive" then we use the scale of The "distance scale dipole" for converting qualitative indices to quantitative indices and placing them in the evaluation and decision-making matrix which follows as :

Table (2): Conversion of quantitative indicators to qualitative

1	2	3	4	5	6	7	8	9	10
Very Low		Low		average		much		very much	

Source: search results

Based on these scales, qualitative criteria were measured and converted into quantitative criteria which the results are reflected in Table (3).

Table (3): evaluation and decision-making matrix

Environmental dimensions	Cultural dimensions	Economic dimensions	Social dimensions	Indicators Cities
5	3	3	3	Zahak
7	5	5	5	Zabol
5	5	3	3	Dost Mohammad

Source: search results

After obtaining the table of the matrix of decision making, table 3, the steps of ELECTRE method were performed as follows:

First step: Not scaling of the matrix of decision (N)

There are different ways to not scaling of the matrix of decision that one of those ways is not scaling of the norms.

In this type of not scaling, we divide each element of the matrix of decision making by the square sum of each column in this way, all the columns of the matrix will have a similar unit and we will be able to compare them easily.

Equation (1)

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

Second step: Gaining of the balanced not scaling matrix (V)

For this purpose, we use the method of Entropy, by using this method we can obtain the weight of indices as equation (2) and table (5):

Table (5): obtain the matrix (V)

C4	C3	C2	C1	Indicators Cities
0.009	0.04	0.08	0.01	A1
0.01	0.04	0.04	0.05	A2
0.03	0.07	0.01	0.08	A3

Source: search results

Equation (2)

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

Table (6): continue with the second step: the obtain the matrix (V)

C4	C3	C2	C1	Indicators Cities
0.50	0.23	0.23	0.23	Ej
0.63	0.50	0.50	0.50	Dj
0.50	0.50	0.23	0.23	Wj

Source: search results

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

Equation (3)

$$k = \frac{1}{\ln(m)} = \frac{1}{\ln 3} = 0.89 \quad \text{Equation (4)}$$

$$d_j = 1 - E_j$$

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

Equation (5)

Now it is possible to obtain the balanced not scaling matrix, for this purpose the not scaling matrix will be multiplied to quadratic matrix ( $w_n \times n$ ) which the diagonal elements of the weights of indices and other elements is zero. This matrix is called the balanced not scaling matrix ( $V$ ) that will be obtained by using the following equation:

$$V = N \times w_{n \times n} \quad \text{Equation (6)}$$

Third Step to seventh step: setting of coordinated and uncoordinated complex  
At this stage, all options will be evaluated with respect to all indices and the matrixes of coordinated and uncoordinated will be formed. Coordinated complex concludes all indices which in them an option is better than other option. For finding this utility, the type of indices should be noticed in having both positive and negative aspects.

This matrix can be calculated by the following equation:

$$I_{kl} = \sum w_j, j \in S_{kl} \quad \text{Equation (7)}$$

The index of  $S_{KL}$  represents the relative importance of  $S_K$  to  $S_L$ . This measure is a numerical value between zero and one and the greater this value, the more preferable the  $S_K$  to  $S_L$  and vice versa. The next step is to determine the uncoordinated matrix based on the matrix of  $V$  and is obtained by using the following formula:

$$NI_{ki} = \frac{\max |v_{kj} - v_{ij}|, j \in D_{ki}}{\max |v_{kj} - v_{ij}|, j \in \sum A} \quad \text{Equation (8)}$$

This criterion measures the lack of acceptance of the complex of (K) and (I) to inconsistency in the indices.

Then for creating an effective matrix of H, you need to determine a threshold first and if each element of matrix of (i) is greater than or equal to it, the amount of that component will be one, otherwise it would be zero.

According to the obtained threshold, larger values than it, will take the number one in the effective matrix and the smaller value than it will take the number Zero. By combining of the effective coordinated matrix with the effective uncoordinated matrix, the general matrix will be obtained and according to the obtained matrix, prioritizing of options is as follows:

Table (7): determining the priority based on parameters the studied cities in Sistan region

Rank	Environmental dimensions	Cultural dimensions	Economic dimensions	Social dimensions	Indicators Cities
3	3	3	2	3	Zahak
1	1	1	1	1	Zabol
2	2	2	2	2	Dost Mohammad

Source: search results

The results of multi-criteria classification of Electre-TRI in determining the importance of the role of managers and urban planners in sustainable urban development based on a set of parameters of sustainable urban development such as: (Social, economic, cultural aspects, and environmental aspects) shows that the city of Zabol is in the first place and the city of Dost Mohammad is in the second place and finally the city of Zahak is in the third place based on the studied criteria.

### CONCLUSION

Today, the urban management has been developed. Cities are managed for more welfare for citizens. Urban management has an important role in the success of the programs and projects of urban development. This will be more important especially in relation to sustainable development. The goal of urban management is improving the working and living conditions of the population living in a social and economic strata and different groups and protection of citizens' rights, to promote sustainable economic and social development and protection of environments. Urban management should plan for the city, organize the urban activities and monitor on the carried activities and create motivation for doing optimal affairs.

So the goal of this paper is the evaluation and analysis of the role of urban planners and managers in sustainable urban development (Case Study: Cities in Sistan region). The research method is descriptive-analytic and is based on library studies. The results of multi-criteria classification of Electre- TRI show that based on the studied criteria, Zabol is in first place and the city of Dost Mohammad is in the second place and finally the city of Zahak is in the last place.

### Suggestions

- ✚ Officials involved in municipal affairs must attract the consent and participation of the people and use their ideas for improvement and more effective use of their program goals.
- ✚ Honesty, transparency and flexibility are the winning factor for managers and urban planners
- ✚ The urban planning of the city council and managers should be offered to the people openly and honestly. This provides increased trust of citizens
- ✚ Reasonable grounds for making people familiar with the laws and regulations of the city

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