



Analysis of land use planning method in middle cities (Case Study: District 4 of Zahedan City)

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ABSTRACT

Urbanization and specific problems of urban life have made it essential to pay great attention to helpful strategies for improving the urban residents' lives. Among the factors, which affect cities such as the urban environment, urban transport, urban safety and planning, the urban management is a crucial factor which has an increasing decisive effect on other components of urban life. With the aim of effective urban administration, the urban management system seeks to coordinate the relationship between urban elements. Nowadays, the chaos is made in land use of cities due to the unplanned urbanization. It is significantly important to organize the urban land use in order to improve the quality of urbanization. In fact, the ecological balance and social justice in the process of urban development is the ultimate goal of land use planning and it should fulfill the human qualitative objectives such as the beauty perception, sense of spatial identity, and sense of belonging to environment because it these factors eventually provide the citizens' "comfort" and "satisfaction". This research studies the analysis of urban management in land use of District 4 of Zahedan City by relying on the library and field studies through responding to questionnaire and referring to relevant authorities as well as analysis of data obtained from SPSS software, one sample t-test and standardized score model. The obtained results indicate the failure of urban management in land use planning and the lack of coordination between uses and executive criteria in this area.

Keywords: Middle city, urban management, Zahedan City, land use

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INTRODUCTION

In today's world, the management of cities is based on the local democratic governments. The whole world has different models of urban local government notably the mayor-council, the council-manager, commission, open town meeting, and representative town meeting among which the contribution of council- manager is more than other cases in different cities around the world. What is now called the local government of city in Iran has been started since the constitutional movement in 1906. Afterwards, the democratic urban institutions of Iran have been significantly changed and continued with fluctuations affecting the political development. It has been faced with expansion and contraction of power in council-manager model with sinusoidal movement affecting by political development and single-structure political system. This model of local government is the same for all cities of Iran and is more affected by powerful institutions of central government than the citizens' demands (Hadi Veysi, Geography and Development, No. 33). However, the efficiency of urban programs and policies largely depends on the quality of responsible planning and executive

institutions (Rezvanian, 2002: 97). Urban development and then the specific problems of urban life such as major social, economic and physical problems have made it essential to pay attention to useful strategies for improvement of citizens' lives. Due to the urban growth and the necessity for fulfillment of citizens' multiple demands, the urban society needs more efficient and creative urban management. Control of urban growth in terms of physical and demographic aspects requires efficient and organized management which can optimally organize all effective elements and factors in urban management in order to meet the citizens' need because the city is a source of development, and the status of urban management in urban development process and improvement of urban residences play decisive roles. Meanwhile, the urban management for controlling the urban land the way of land use and urban construction need the land-use planning which is consistent with needs of urban population. A proper planning can ensure increasing the efficiency of urban management in urban land use. The urban management is affected by various forces and sectors including the public-governmental sector, civil society and the private sector forces. Therefore, city is the outcome of single and collective decision-making process among these groups. This paper investigates the systematic functionalism, structure and functions of urban management

system and determines the challenges and shortcomings of urban management system by explaining the urban management rules within the framework of structure-oriented and performance-oriented views and sustainable development in the field of urban land use and provides a strategic plan for reforming this system.

Methodology

Due to the characteristics of this issue, this paper uses the common methods in human science studies. This research is applied in terms of objective, and it is descriptive-analytical in terms of nature. In descriptive method, data is collected by library and fields studies. The indices are considered in analytical method (statistical analysis) according to the research hypotheses and operational variables, and then the

Table 1: Methods and tools of data collection

No.	Method	Tools
1	Library	Study on publications and academic journals, books and theses, statistics, document and internet searches
2	Field	Inventory, special impressions, specialized checklist for data collection from municipal organization and its affiliated departments

The sample or sample population refers to a part of society which represents the community. In other words, it refers to all social traits which are important in terms of research subject, and exist proportionally in the sample, and its results can be generalized to the entire population. The main sampling question is how the generalizability or representativeness (selection of an appropriate population sample) of research results can be provided for the whole population (Azkia and Darban-Astaneh, 2003, 248). Two factors play decisive roles in determining the sample size: First, the level of precision and reliability in data generalization; and second, the facilities available to study. The minimum confidence level of 95% is considered in social sciences and human geography (Mahmoudi-pati et al., 2008). According to the latest population census in Zahedan city, 560575 people are considered for obtaining the sample size according to Cochran's formula (Hafeznia, 2009, 142); and the samples are selected at the level of 95% (error level of 5%). The statistical population of this research consists of 199057 local residents, and urban management experts and managers; and the sample size is obtained equal to 383 according to Cochran's formula. 100 out of 383 questionnaires are distributed among the urban managers and experts and other relevant experts, and 283 questionnaires among the local residents, and then their data is extracted.

$$1 + \frac{1}{N} \left(\frac{t^2 pq}{d^2} - 1 \right) = 199057n = 383$$

Formula 1

Table 2: Cronbach's alpha test for reliability of questionnaire

Reliability Statistics		
Cronbach's Alpha	Cronbach's alpha based on Standardized Items	N of Items
0.830	0.98	2

Since the Cronbach's value of alpha is higher than 0.7 (0.83), the questionnaire has good reliability, and thus we can ensure the internal consistency of questions. The items of questionnaire can be measured based on Likert scale.

data of these indices is collected by questionnaire and analyzed using statistical analysis. Data collection is performed by two methods in this study.

A) Library and documentary method: This method is used to achieve the research principles including topics such as the key and operational definitions and concepts, research literature, research necessity and importance, description of application, design of indices and variables, and theoretical perspectives of research. The provision of fiche for data collection is the applied tool in this method.

B) Field method: This method consists of questionnaire design, preparation of specialized checklists, and particular interpretations.

Research hypotheses

- 1- It seems that the urban management has not been successful in control and supervision of urban land use in District 4 of Zahedan city.
- 2- It seems that the land use in District 4 of Zahedan city is not according to the executive criteria of application.

Questionnaire test

The measurement tool should have reliability and validity, and thus the researcher will be able to collect data according to the research and test the target hypotheses and respond to research questions through this data and their analysis. The assessment tool and standardized tests usually have appropriate reliability and validity, so the researchers can utilize them with confidence, but the researcher-made tool does not provide such this confidence, and the researcher need to ensure its validity and reliability (Hafeznia, 2009, 154-155).

Statistical test

The validity of indices was measured by Cronbach's alpha coefficient. According to SPSS software, the Cronbach's alpha coefficient was obtained equal to r=0.83 indicating that the collection tool had acceptable validity.

A questionnaire was developed to confirm the initial framework, and it was distributed among 100 land-use management experts in executive agencies and 283 residents after confirming the validity and reliability. The collected data is analyzed using descriptive statistics (mean and standard deviation) and inferential statistics (one-sample t-test) through SPSS software and through scoring model and standardization. In this study, Cronbach's alpha reliability is determined through SPSS software.

➤ **T-test**

T-test is used to determine the difference between samples. This test compares the mean difference between samples with probable randomness of this difference. This test compares the mean sample through standard error of mean difference.

➤ **Friedman test**

Friedman test is one of the non-parametric tests applied for comparing three or more correlated groups. This method creates a table in which each column of information contains a subject; and the information of each column is ranked, and then the sum of ranks is calculated for each column.

➤ **Concept of executive regulations**

According to author, the executive regulations in the second hypothesis are as follows:

- 1- Regulations on the issuance of building permits
- 2- Civil regulations in urbanization and municipality
- 3- Regulations on national land sales
- 4- Regulations on urban physical development
- 5- Regulations on the implementation of development and urban projects
- 6- Regulations on urban land use change
- 7- Building regulations
- 8- Regulations on layout and establishment of urban use mentioned in the attached questionnaire.

The author has sought to receive the samples' responses to the second hypothesis with the minimum error by inclusion of relevant questions in the questionnaire.

Analysis method

Mean population test, and one-sample statistics t-test

We describe the statistical test in order to understand the research process. This test studies the hypothesis about the mean population at error level of alpha. The t- statistic of this test has degree of freedom equal to N-1. This test is applied for quantitative variables as well as identifying the impact of a variable in studied status. Furthermore, it is applied to test the hypotheses which consider the mean population mean equal to or greater or smaller than a particular number. The hypothesis test for these tests contains three steps:

1- Hypothesis explanation

$$\begin{cases} H_0: \mu_x = \mu_0 \\ H_1: \mu_x \neq \mu_0 \end{cases} \quad \begin{cases} H_0: \mu_x \geq \mu_0 \\ H_1: \mu_x < \mu_0 \end{cases} \quad \begin{cases} H_0: \mu_x \leq \mu_0 \\ H_1: \mu_x > \mu_0 \end{cases}$$

2- Calculation of test statistics

If sample is selected from a normal population with known standard deviation, the distribution of X is normal regardless of sample size, and thus the test statistic will be equal to Z.

$$Z = \frac{\bar{x} - \mu_0}{\sigma_{\bar{x}}}$$

But if the samples are selected from normal population with unknown standard deviation, then the sampling distribution of X is defined with respect to the sample size. Furthermore, if the small size is less than 30, the distribution of population follows distribution T with statistics of following test:

$$t = \frac{\bar{x} - \mu_0}{S_{\bar{x}}}$$

If the sample size is equal to or greater than 30, the distribution of population has normal approximation based of the central limit theorem, and the statistic of its test is according to the following equation:

$$t = \frac{\bar{x} - \mu_0}{S_{\bar{x}}}$$

3- Determination of critical border

$$t_{\alpha, n-1} =$$

The critical values are extracted according to alpha value and degree of freedom from statistical table.

4- Decision-making

Comparison of critical values with obtained value from t-test statistic is a criterion for approval or rejection of null hypothesis.

$$t_{\alpha, n-1} \leq T \quad H_0 \text{ is confirmed}$$

$$t_{\alpha, n-1} > T \quad H_0 \text{ is rejected}$$

The Significance value of error in rejection of null hypothesis is important in SPSS software. If it is less than 0.05, the H₀ can be rejected in favor of the alternative hypothesis (H₁). Furthermore, SPSS software only can test the claim for equality and bilateral hypotheses. For judgment on the claims with the "or" term, we can use the upper and lower limit values or the mean difference. The parametric one-sample statistics- t-test using SPSS software is applied to analyze the inferential hypotheses of data analysis.

Applied model for data analysis:

The standardized score model is applied in this study and it is in fact a quantitative-mathematic model. We first standardize the answers in order to apply the standardized score method. Therefore, we use the following formula.

$$SS_{ij} = \frac{x_{ij} - \bar{x}}{\sigma_j} \quad \text{Formula (2)}$$

In formula (2):

- SS_{ij} : Standardized score of index i in filed j
- x_{ij} : Value of index i in filed j
- \bar{x} : Mean index i
- σ_j : Standard deviation of index i

Given the number of respondents and indices, we will have a matrix with n respondents in columns and n rows. Its columns are the respondents' comments, and its rows are the indices. Afterwards, the obtained standardized scores from respondents' for each index are summed, and the outcome is divided by the total number of respondents. The obtained score is the average standardized score or the score for compliance of each index with subject of second hypothesis.

Natural characteristics of Zahedan City

Zahedan City is located in the northern small plain surrounding numerous mountains. In terms of geographical location, Zahedan is located in longitude of 60° 51' 25" E and latitude of 29° 30' 45" N. Zahedan, capital of Sistan and Baluchistan, is located in the southeast Iran and adjacent to Afghanistan and Pakistan. This city is limited to Zabol county from the north, Afghanistan from the northeast, South Khorasan Province from the northwest, Kerman province from the West, Iranshahr county from the southwest, Pakistan from the east, and Khash county from the southeast. Its altitude is 1378 meters. Based on the census conducted by the Statistics Center of Iran in November 2011, Zahedan City had 560575 inhabitants (Statistical Center of Iran, 2011). With an area of 7200 ha, this city was divided into three regions, 20 districts and 78 neighborhoods based on the detailed plan in 1990 (Shahr va Khaneh Consulting Engineers, 1999: 32). This division was revised in 2010 and changed to five urban districts in which all districts consisted of 11 neighborhoods.

Descriptive findings

Gender

Table 3 shows the frequency distribution and frequency percentage of statistical sample in terms of gender.

Table 3: Frequency distribution of statistical population in terms of gender

	Male	Female
Frequency percentage	70%	30%

According to the descriptive statistics presented in Table 3, 70% of respondents are male and 30% are female.

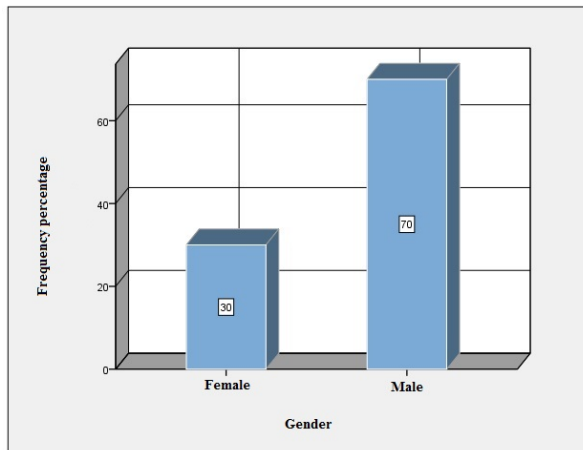


Figure 1: Diagram of respondents' frequency percentage in terms of gender

As shown in Figure 1, 30% of respondents are female and 70% are male.

Age
Table 4 presents the descriptive statistics of statistical population from perspective of age.

Table 4: Frequency distribution and percentage of respondents in terms of age

	Below 30	31 to 40	41 to 50	51 to 60	61 and above
Frequency percentage	10%	23%	44%	17%	6%

According to presented data in Table 4, 10% of respondents are younger than 30 years old, 23% are from 31 to 40 years of age, 44% from 41 to 50 years, 17% from 51 to 60 years, and 6% from 61 years and above. Figure (2) shows the diagram of respondents' frequency percentage distribution in terms of age.

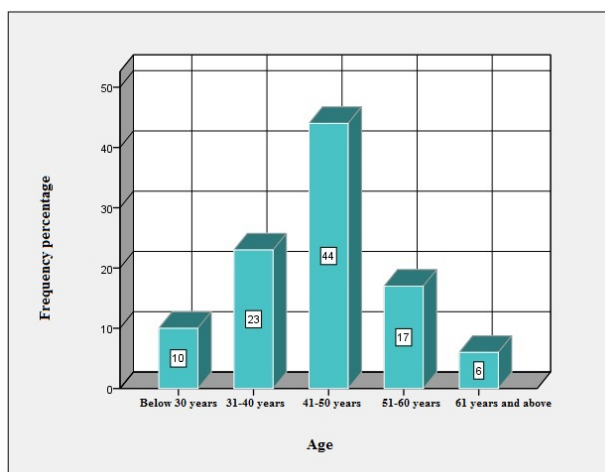


Figure 2: Diagram of respondents' frequency percentage in terms of age

According to Figure 2, 44% of respondents are at the age range of 41 to 50 years, 23% at the age range of 31 to 40 years, 17% at the age range of 51 to 60 years, 10% below 30 year and 6% are 61 years and above.

Current post

Table 5 presents the frequency distribution and percentage of respondents in terms of current post.

Table 5: Respondents' frequency distribution in terms of current post

	Manager	Expert
Frequency percentage	41%	59%

Based on the obtained results of Table 5, there are 41 managers and 59 experts among respondents. Figure 3 shows the respondents' distribution percentage in terms of current post

Figure 3: Diagram of respondents' frequency percentage in terms of current post

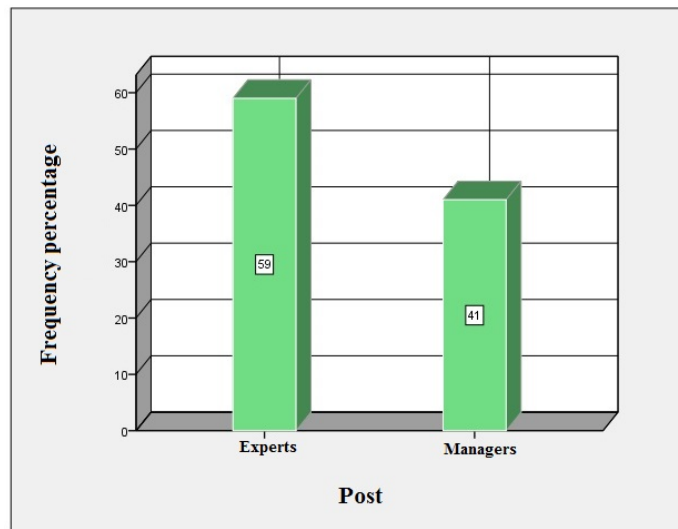


Figure 3 shows that more than 50 percent of respondents are experts, and 41 percent are managers.

Table 6 presents the Respondents' frequency distribution in terms of workplace.

Workplace

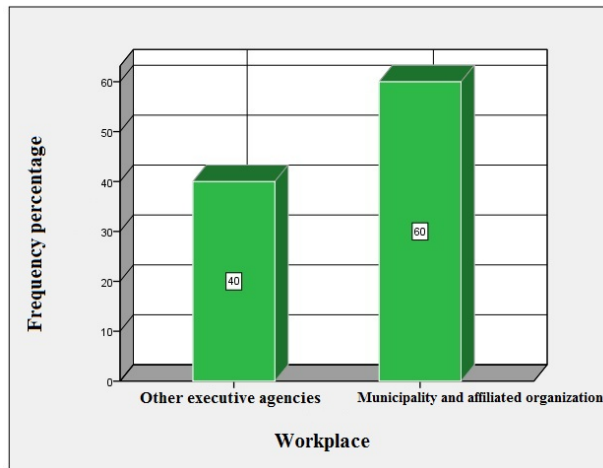
Table 6: Frequency distribution and percentage of respondents in terms of workplace

	Municipality and affiliated organizations	Other executive agencies
Frequency percentage	60%	40%

According to presented data in Table 6, 60 respondents work in municipality and affiliated organizations, and 40 respondents work in other executive agencies.

Figure 4 presents the respondents' frequency percentage in terms of workplace

Figure 4: Respondents' frequency percentage in terms of workplace



According to Figure 4, 60% of statistical population works in municipalities and affiliated organizations and 40% in other agencies.

Work experience

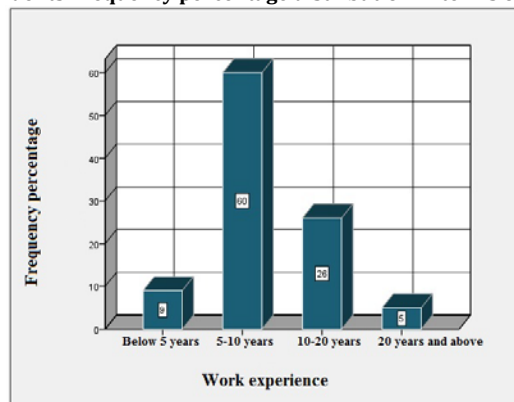
Table 7 presents the descriptive statistics of statistical population in terms of work experience.

Table 7: Work experience

	Below 5 years	5 to 10 years	10 to 20 years	20 years and above
Frequency	9	60	26	5
Frequency percentage	9%	60%	26%	5%

According to Table 7, among 100 respondents, 9% have work experience of below 5 years, 60% from 5 to 10 years, 26% from 10 to 20 years, and 5% 20 years and above.

Figure 5: Respondents' frequency percentage distribution in terms of work experience



According to figure (5), the majority of respondents have work experience of 5 to 10 years. Furthermore, about 30 percent have work experience of 10 years and above, and only 9% have work experience of less than 5 years.

Analytical findings

This study consists of two hypotheses which are analyzed in this section.

First hypothesis test

H₀: It seems that the urban management has not been successful in control and supervision of urban land use in District 4 of Zahedan city.

H₁: It seems that the urban management has been successful in control and supervision of urban land use in District 4 of Zahedan city.

Ten questions are asked from statistical population in order to examine the first hypothesis. These questions and descriptive statistics of answers are presented in Table 8.

Table 8: Descriptive statistics of first hypothesis questions

	Indices (questions)	Totally agree	Agree	Neither agree nor disagree	Disagree	Totally disagree	Mean answers
1	Healthcare uses are fairly distributed in District 4 of Zahedan.	6	25	33	21	15	2.86
2	Cultural uses are fairly distributed in District 4 of Zahedan.	0	5	14	24	57	1.67
3	Educational uses are fairly distributed in District 4 of Zahedan.	3	5	9	12	71	1.57
4	Public service uses are fairly distributed in District 4 of Zahedan.	6	15	38	20	21	2.65
5	Urban streets in District 4 of Zahedan are suitable.	5	20	42	18	15	2.82
6	Urban streets in District 4 of Zahedan are well designed.	8	17	32	24	19	2.71
7	Problems caused by poor neighborhood of some uses	8	12	40	32	8	2.80
8	Non-compliance between capacity of some streets and their traffic and causing trouble for residents around them	8	29	30	25	8	3.04
9	Non-compliance and inappropriate distribution of uses such as education, sports, health, etc. in the region	9	21	43	19	8	3.04
10	Problems caused by narrow and spiral passages in old fabric	3	9	27	29	32	2.22

The mean of 10 questions in table 8 is obtained, and the control and supervision of urban land use is measured in order to

investigate the first hypothesis. Descriptive statistics of this variable are presented in Table 9.

Table 9: Descriptive statistics of control and supervision of urban land use

	Mean	Standard deviation	Variance
Control and supervision of urban land use	2.53	0.49864	0.249

According to Table 9, the mean value of respondents' responses to control and supervision of urban land uses is equal to 2.53. The standard deviation of responses is equal to 0.49864 and their variance is 0.249. The single-sample t-test is used to study the first hypothesis. One-sample t-test investigates the utility or non-utility, and the presence or absence, and the

confirmation or rejection. Since the questions of this research follow the five-point Likert scale, the t-value is equal to 3. If the significance level is less than 0.05 and the t-value of one-sample t-test is positive, it indicates the utility, presence or conformation, otherwise it indicates the non-utility, absence and rejection. The results of one-sample t-test for investigation of first hypothesis are presented in table 10.

Table 10: First hypothesis test

	t-value = 3		
	t	df	Significance level
First hypothesis	-9.265	99	0.000

According to Table 10, which presents the results of first hypothesis, since the significance level is equal to 0.000 and less than 0.05 and the t-value is negative and equal to -9.265, the H_0 of first hypothesis is not rejected, and thus the first hypothesis of research is rejected. From perspective of statistical population, it seems that the urban management has not been successful in control and supervision of urban land use in District 4 of Zahedan City.

Second hypothesis test

H_0 : Land use in District 4 of Zahedan is not coordinated with executive criteria of uses.
 H_1 : Land use in District 4 of Zahedan is coordinated with executive criteria of uses.
 34 questions are raised to investigate the second hypothesis and they investigate the non compliance of land use with executive criteria. The descriptive statistics of 34 questions are mentioned in order to examine this hypothesis. Results of descriptive statistics are presented in Table 11.

Table 11: Descriptive statistics of second hypothesis questions

	Indices (questions)	Totally agree	Agree	Neither agree nor disagree	Disagree	Totally disagree	Mean answers
1	Weak public participation in urban issues due to the residents' cultural and economic problems in neighborhoods of District 4	35	20	25	20	0	3.7
2	Lack of instructions and comprehensive framework for attracting the public participation in physical-spatial development	29	32	30	9	0	3.51
3	The illegal and without-license construction in the night and without supervision of officers especially in marginal areas	40	25	30	3	2	3.98
4	Lack of expertise and necessary training in departments involved in urban planning	45	40	15	0	0	3.4
5	Non-organized educational status for manpower, and irrelevant use of manpower in different expertise	50	50	0	0	0	4.5
6	Financial and credit problems in municipality in implementation of land use projects in terms of financial aspect and real estate purchase	53	17	20	5	5	4.22
7	Unstable sources of funding and limited sources of municipality income	35	42	13	10	0	4.71
8	Financial and credit dependence of municipality to governorate	43	11	23	20	3	3.71
9	Citizens' financial problems to keep pace with implementation of urban development projects	74	26	0	0	0	4.74
10	Non-compliance of service equipment and facilities by municipality with structure and needs of districts	25	28	30	17	0	3.62
11	Long duration of implementing the construction projects such as opening the streets and crossings	85	15	0	0	0	4.84
12	Old organization structure of some executive entities	60	20	15	3	2	4.33
13	Conflict of registration rules with laws and regulations of urbanization	83	15	2	0	0	4.81
14	Legal problems in dealing with citizens' violation	54	40	6	0	0	4.48
15	Lack of legislation on authority and efficiency of urban management	38	47	4	11	0	4.10
16	Not-updated rules and regulations on procedure	50	40	10	0	0	4.40
17	inefficiency of construction rules and regulations	48	42	2	8	0	4.30
18	Inconsistent of urban projects with natural, economic, and social characteristics of area	87	13	0	0	0	4.86
19	Uncontrolled expansion and growth of city towards the agricultural lands and villages around the city	75	15	10	0	0	4.65
20	The project adviser's lack of attention to land ownership in preparation of land use project and proposal	96	4	0	0	0	4.96
21	Applying the indirect pressure on some municipality management by some political forces	50	50	0	0	0	4.49
22	Unknown mechanisms of citizens' participation in preparation and implementation of regional development projects	80	15	5	0	0	4.77
23	The project adviser's lack of attention to land ownership in preparation of land use project and proposal	77	13	10	0	0	4.67
24	Advisor's non-coordination with managers and citizens during the project development	84	16	0	0	0	4.84
25	Interference and intrusion of groups and beneficiaries in design and implementation of urban land use projects in favor of their interests	67	30	3	0	0	4.64
26	Problems of existing detailed plans in current and future development of regional	81	17	2	0	0	4.79

27	Lack of information, statistical sources and appropriate systems and mechanisms to identify the residents' issues and problems in the region	49	40	11	0	0	4.38
28	Failure to review the rules and regulations and existence of outdated and complex laws (such as acquisitions, Articles 147 and 148 of registration law)	83	17	0	0	0	4.83
29	Some managers' emphasis on personal ideas of ignoring the rules and regulations of land use	93	7	0	0	0	4.93
30	Disagreement among the urban managers about urban issues	91	9	0	0	0	4.91
31	The multiplicity of decision-making authorities, and lack of interactional relationship among the organizations involved in urban management	72	28	0	0	0	4.72
32	Lack of certain and scheduled plans in entities related to urban land use planning, and the lack of spirit of partnership and cooperation among the urban managers	90	5	5	0	0	4.85
33	Employees' lack of knowledge about urban land use problems in organizations related to urban management	54	40	6	0	0	4.48
34	Negligence and improper implementation of laws and regulations related to urban land uses by some of the staff involved in urban management	83	15	2	0	0	4.81

The mean response is obtained from answers to 34 questions by managers and employees in municipality and other executive

Table 12: Descriptive statistics of the second research hypothesis

	Mean	Standard deviation	Variance
Non-compliance of land use with executive criteria	4.47	0.257	0.066

As shown in Table 12, the mean value of responses to the second hypothesis is equal to 4.47, standard deviation 0.257 and variance 0.066.

One-sample t-test should be used to investigate the second hypothesis. The results of this test are presented in Table 13.

Table 13: Second hypothesis test

	t-value = 3		
	t	df	Significance level
Second hypothesis	57.362	99	0.000

According to Table 13, which test the second hypothesis using the one-sample t-test, since the significance level of this test is equal to 0.000 and less than 0.05, and t-value is positive and equal to 57.362, and the questions are negative, the H0 is not rejected, and thus the second research hypothesis is not confirmed. According to statistical population view, the land use of District 4 of Zahedan City is not complied with executive criteria of uses.

Hypothesis test using standardized scoring

The status of all 34 research indices is evaluated to compare the status of land uses in District 4 of Zahedan with executive criteria from perspective of municipality managers and employees in District 4 and other organizations and residents in order to study the second hypothesis of research. Table 5-6 presented the frequency distribution and mean response of respondents, and then the hypothesis was tested using the one-sample t-test. In this section, the status of all 34 indices will be evaluated according to the compliance with executive criteria, and finally the general status of land use in district 4 of Zahedan will be studied in terms of compliance with executive criteria. As mentioned above, the respondents' responses are put in five-point Likert scale, and thus if there is non-compliance between the existing status and standards in each criterion, the response will receive the score 5, otherwise it will get the score 1.

organizations and residents in order to study the descriptive statistics of the second hypothesis as shown in Table 11. The results of descriptive statistics are presented in Table 12.

Since the questions of second hypothesis are negative, if the significance level is less than 0.05 and the t-value is positive, the H0 will not be rejected, otherwise the H0 will be rejected and H1 confirmed.

We first standardize the answers to apply the standardized score method. Therefore, we use formula 3.

$$SS_{ij} = \frac{x_{ij} - \bar{x}}{\sigma_j}$$

Formula 3

Where,

- SS_{ij} : Standardized score of index i in district or neighborhood j
- x_{ij} : Value of Index i in district or neighborhood j
- \bar{x} : Mean Index i
- σ_j : Standard deviation of index i

Given that the number of respondents was 383 and the number of indices was 34, we would have a matrix with 383 columns and 34 rows from which the columns present the respondents' views, and the rows refers to the indices. Since this matrix has a large size, it will not be mentioned in this section.

Afterwards, the standardized scores obtained from the respondents' views for each index will be summed and the outcome will be divided by the total number of respondents. The obtained score refers to the average standardized score or the score of compliance of each index with executive criteria of uses. This score is calculated according to the formula 2:

$$SS_i = \frac{\sum SS_{ij}}{n}$$

Formula 4

In Formula 4, n is the number of considered respondents. The obtained results for all indices are presented in Table 14 in accordance with standardized score method.

Table 14: Total score of each index

Number of index	Indices	Total score
S1	Weak public participation in urban issues due to the residents' cultural and economic problems in neighborhoods of District 4	-0.937
S2	Lack of instructions and comprehensive framework for attracting the public participation in physical- spatial development	-0.849
S3	The illegal and without-license construction in the night and without supervision of officers especially in marginal areas	-0.383
S4	Lack of expertise and necessary training in departments involved in urban planning	-0.009
S5	Non-organized educational status for manpower, and irrelevant use of manpower in different expertise	0.235
S6	Financial and credit problems in municipality in implementation of land use projects in terms of financial aspect and real estate purchase	-0.102
S7	Unstable sources of funding and limited sources of municipality income	-0.300
S8	Financial and credit dependence of municipality to governorate	0.126
S9	Citizens' financial problems to keep pace with implementation of urban development projects	0.547
S10	Non-compliance of service equipment and facilities by municipality with structure and needs of districts	-0.702
S11	Long duration of implementing the construction projects such as opening the streets and crossings	0.659
S12	Old organization structure of some executive entities	0.683
S13	Conflict of registration rules with laws and regulations of urbanization	0.801
S14	Legal problems in dealing with citizens' violation	0.206
S15	Lack of legislation on authority and efficiency of urban management	-0.316
S16	Not-updated rules and regulations on procedure	0.576
S17	Inefficiency of construction rules and regulations	0.529
S18	Inconsistent of urban projects with natural, economic, and social characteristics of area	0.681
S19	Uncontrolled expansion and growth of city towards the agricultural lands and villages around the city	0.766
S20	The project adviser's lack of attention to land ownership in preparation of land use project and proposal	0.795
S21	Applying the indirect pressure on some municipality management by some political forces	0.220
S22	Unknown mechanisms of citizens' participation in preparation and implementation of regional development projects	0.587
S23	The project adviser's lack of attention to land ownership in preparation of land use project and proposal	0.467
S24	Advisor's non-coordination with managers and citizens during the project development	0.659
S25	Interference and intrusion of groups and beneficiaries in design and implementation of urban land use projects in favor of their interests	0.484
S26	Problems of existing detailed plans in current and future development of regional	0.608
S27	Lack of information, statistical sources and appropriate systems and mechanisms to identify the residents' issues and problems in the region	0.327
S28	Failure to review the rules and regulations and existence of outdated and complex laws (such as acquisitions, Articles 147 and 148 of registration law)	0.649
S29	Some managers' emphasis on personal ideas of ignoring the rules and regulations of land use	0.760
S30	Disagreement among the urban managers about urban issues	0.737
S31	The multiplicity of decision-making authorities, and lack of interactional relationship among the organizations involved in urban management	0.522

S32	Lack of certain and scheduled plans in entities related to urban land use planning, and the lack of spirit of partnership and cooperation among the urban managers	0.809
S33	Employees' lack of knowledge about urban land use problems in organizations related to urban management	0.571
S34	Negligence and improper implementation of laws and regulations related to urban land uses by some of the staff involved in urban management	0.627

As shown in Table 14, the total score of all indices is obtained from the standardized score method. Given the type of initial

scoring (5 represents the highest non-compliance, but 1 represents the lowest non-compliance), the classification of scores will be according to Table 15:

Table 15: Classification of scores

Type of class	Score range
Very high compliance with standards	Less than -1
High compliance with standards	From -0.25 to -1
Medium compliance with standards	From -0.25 to 0.25
Not high compliance with standards	From -0.25 to +1
Not very high compliance with standards	More than +1

Source: Ibid

than -1, it refers to very high compliance of that index with executive criteria of land use.

According to Table 15, we can investigate the compliance or non-compliance of all indices with executive criteria. Therefore, if obtained score of an index is more than 1, it indicates the non-compliance of that index with executive criteria; and if it is less

Table 16 presents the classification of all indices in terms of compliance with executive criteria of uses in District 4 of Zahedan City.

Table 16: Compliance or non-compliance of all indices with existing criteria from perspective of respondents

Type of class	Indices
Very high compliance with standards	-
High compliance with standards	S1, S2, S3, S7, S10, S15
Medium compliance with standards	S4, S5, S6, S8, S14, S21
Not high compliance with standards	S9, S11, S12, S13, S16, S17, S18, S19, S20, S22, S23, S24, S25, S26, S27, S28, S29, S30, S31, S32, S33, S34
Not very high compliance with standards	-

As shown in Table 16, none of the indices are fully complied with existing land use criteria in District 4 of Zahedan City. 6 indices have high compliance with existing standards; 6 indices have medium compliance; and 22 indices have high non-compliance

with executive criteria. In addition, none of the indices are fully contradicted with existing standards.

The mean scores are obtained for studied 34 indices in order to test the second hypothesis and determine the total score of land use compliance in District 4 of Zahedan City with executive criteria of land use. Table 17 presents this result.

Table 17: Assessment of second research hypothesis using standardized scoring

	Total score	Type of class
Compliance of land use with executive criteria in District 4 of Zahedan City	0.3247	Not high compliance with standards

As shown in Table 17, the total score of land use compliance with executive criteria is equal to 0.3248 in District 4 of Zahedan City. According to the classification of scores in Table 15, this score is put in the class of not very high compliance with criteria, and thus the second hypothesis is rejected based on the standardized scoring; hence, there is not any compliance between the land use in District 4 of Zahedan City with executive criteria from perspective of municipality managers and employees and also the residents. Based on the results of Table 17, this non-compliance is very high.

Conclusion

Physical expansion of Zahedan City, as one of the largest emerging cities, has been due to the influence of different factors which are not limited to certain time and place, but the roles of some time periods are more impressive in these changes, so that the city will lose its balanced form and procedure. On the one hand, due to the increased population and changed lands around Zahedan into the residential lands, the urban hierarchy is not complied. This non-compliance has made numerous problems for urban management affecting any decision making

by urban planners. On the other hand, the urban land use planning investigates the ways of use, distribution, protection, and spatial organization of urban functions according to standards of current and future status or in a particular time period. The analysis of urban land use in studied area indicates that this city has had high physical and population growth over the several decades, so that the existing urban land uses and especially the studied area should be planned and balanced in order to balance the urban construction and land use. The existing land uses of District 4 have not been able to respond to residents' needs and solve the urban shortcomings. Based on the obtained results of research tests, the urban management has not been successful in control and supervision of urban land use in District 4. Furthermore, a major section of land uses in this region is not consistent with executive criteria.

Suggestions:

- 1- Employing the efficient experts in decision-making and reference positions and implementation of urbanization criteria.
- 2- Creating the necessary reforms in accordance with residents' needs and capacity of region in existing detailed plan by expert team in urban planning principles near the region.
- 3- Special investment in rising the residents' cultural levels for compliance with urbanization rules as well as participation in implementation of detailed plan such as helping to evacuate the commercial and residential lands in order to implement the project via broadcasting and other media.
- 4- Holding the in-service urbanization training courses for municipal staff who are working in relevant posts.
- 5- Allocating the sufficient funds in municipal budget for preparation and delivery of compensated lands to people whose properties are in the scope of project.
- 6- Judicial and police authorities' proper cooperation with municipality in implementation of detailed plan.
- 7- Holding the shared workgroups in different executive organizations with urbanization function in order to create interaction and cooperation to achieve the common goals and improve the land uses according to defined criteria.

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