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## **IDENTIFYING AND RANKING MUNICIPALITY CONTINUOUS INCOME SOURCES (CASE STUDY: BORAZJAN CITY)**

\***Seyed Abbas Mousavi<sup>1</sup> and Reza Bozorgmehr<sup>2</sup>**

<sup>1</sup>*Department of Business Management, Persian Gulf University, Bushehr, Iran*

<sup>2</sup>*Department of MBA, Finance Expert, Municipality of Borazjan, Bushehr, Iran*

\**Author for Correspondence*

### **ABSTRACT**

Running the cities in a desired way, in addition to proper management by mayors, requires not only decent income and spatial credit but also proper use of them. This study, in hope of achieving the appropriate pattern of municipality's income sources, identifies and ranks regular income sources in the municipality. After examining the theoretical basis, 40 micro-codes of income sources were identified and classified in 6 groups. It is noteworthy that, the importance of each micro-code and income source was determined not only through a structured questionnaire survey, design, and distribution but also according to experts. Using the Cochran formula, the population of managers, assistants, experts, members of income committee, and all the members of the city council of Borazjan were 104. Furthermore; not only were, in order to rank income sources, research hypotheses, using various statistical tests including Friedman nonparametric test and test Kendall W, analyzed but also some solutions were offered. According to the findings, the most important income sources were service price and profitmaking organizations, donations from individuals and private organizations, municipality funds and property, public toll, other sources of financing, special toll respectively.

**Keywords:** *Regular Income, Income Sources, Municipality Income Management*

### **INTRODUCTION**

One of the main concerns of managers and urban planning is to achieve sustainable urban development (Sharzei and Qatmiri, 2001). Among the known sources for organizations, funding sources are the real driving force (Nraqyan *et al.*, 2010). Nowadays, considering the insight gained from the developed countries and experts, some new approaches are provided to achieve sustainable and regular sources; hence, giving services to the citizens are significantly under the influence of municipality income (Aliabadi and Maasum, 2001). If municipality is not able to provide decent and sustainable money, it won't be able to provide the city with the necessary requirements either. Every municipality financial supply is to some extent accessible but not all are sustainable. To be sustainable is to be not only relatively continuous but also not to be of any danger to the city's quality condition; hence, considering the previous sentence, achieving new approaches to sustainable, regular, and guaranteed income supply, regarding its compatibility with social, political, and economic conditions and the fact that it doesn't bring any dangers to the above-mentioned conditions, will not only bring about the citizens' satisfaction and city development but also will lead to city's proper management (Moezymoqadam, 2012). Furthermore, regarding the two decades passed since cities proper management was first started in Iran, considering the present limitations and problems and the fact that these limitations and problems are possible and necessary to be covered, it is vital to evaluate and analyze the past approaches used in the new cities (Jamali, 2004). Simply put, continuous income should be regular and not harmful. Consequently, these evaluation and analyses will not only help identifying the new cities' present conditions and reconsidering the taken-to-develop-these-cities-actions but also, through real and impartial analysis, lead to some approaches on which, considering the past, more legal and harmonized actions are based.

#### **Defining the Issue**

Population change has brought about several problems for mayoralties in terms of their main duties including city management and development and various services (Bahnemir and Najarian, 1999); therefore, the main issue is the problems that exist due to improper management, financial control, budget

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setting, and money spending and lack of sustainable and regular income. It is possible to increase the sustainable and regular income of mayoralties? Can this increase help the economical state of the country (Shahri, 2012)? 60 percent of the country's population is leaving in cities. Considering the previous sentence and the city population increase rate, being more than the national population, and the fact that a large amount of income is devoted to value added and occupations of cities, it is crystal clear that cities economical state is of a great value in Iran (Qadiri, 2006). The self-dependency self-reliability of mayoralties, first established as a plan in 1983, without considering the theoretical basis on which the financial relations of government and municipality are based, has put mayoralties into some hard conditions to the extent that their share in government is about to decrease. Dependency of mayoralties' income on government, rising of severe problems due to immigration and population increase, large demand of city services, and the mayoralties' dependency on unsustainable income have also put the authorities into hard situations in mayoralties (Bahnemir and Najarian, 1999); hence, according to the experience of the developed countries regarding the ways to achieve sustainable and regular income, mayoralties should change the nature to sustainable, regular, and accessible one, tending to the mentioned ways rather than the unsustainable ones (Aliabadi and Maasum, 2001).

### **Significance of the Research**

Since no plan can be put into practice without decent and proper budget, no plan is applicable without any money. Furthermore, mayoralties are supposed to spend money in order to gain decent income. It is noteworthy that every receivable cannot be labeled as income because it may bring micro or macro costs (Mousavi *et al.*, 2011).

Interestingly, 71.85 % of Borazjan's municipality income is unsustainable, leaving the 28.15 % sustainable and regular. Considering the fact that this income is improper, inflexible, and unstable, it is vital to identify and rank the sustainable and regular income sources; furthermore, continuous and stable development is only achieved through sustainable and regular income, giving credit to the significance of this research.

### **Purposes of the Research**

Evaluating the income sources of Borazjan municipality as an important county of Bushehr can be labeled as a process of urbanization, covering the problems of the province. This matter, in the present conditions, is one of the most important social and economic-related issues. Consequently, in hope of area planning, it is vital to cover the mentioned matter.

### **Research Main Purpose**

This research's main purpose, in hope of improvement of the income-receiving ways, is to identify and rank the income sources and provide practical approaches in municipality of Borazjan. In addition, there are some other purposes which are put as the second priority regarding the above-mentioned main purpose. These purposes are as follow:

- 1) Evaluation of income state of municipality of Borazjan
- 2) Ranking the income sources of Borazjan's municipality in hope of providing a way to improve the income of the mentioned municipality to the extent that it becomes self-reliant.
- 3) Providing authorities with some practical approaches to manage the municipality well in terms of the city income and future planning

### **Review of the Literature**

Mayoralties dependency on governmental sources before the revolution and some special phenomena including 8-year-lasting war have caused the municipality -income-related researches and practical approaches and city management to be of a lower importance, focusing less on its improvement (Shahoseyni, 2010).

Although there are numerous problems regarding the income sources of mayoralties, there are no records of them in city science journals and only some exist in national ministry which is directly in contact with mayoralties (Jamali, 2004). The government, cooperating with some consultants, before and after the revolution, conducted some researches on the mentioned topic (Shahoseyni, 2010). Also; there exist some similar researches worldwide as follow:

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Salivan (2000) believes that the useful combination mayoralties income sources includes a set of product selling, city services, different taxes and tolls, and financial help of the central government. He, also, comparing the municipality of Tehran and the ones in America concluded that Tehran's municipality's income is mostly of land and building to the extent that government help is subtle while the income is mostly government-related in America.

De Mello (2002) evaluated the local cost influence on economic development of mayoralties of Brazil, clarifying that local cost has increased the received local tax. That is, the money spent on the city development will, in future, be, due to the city's economic growth, compensated through tax increase.

Jaumotte *et al.*, (2008) showed that in the last two decades, the increase, both in developed and under-the-process-of-the-development countries, is mainly due to some technical change, declaring that becoming widely developed is, in general, slightly less in terms of being influential.

According to a research, "the evaluation of income sources compatibility and the mayoralties' duties (case study, municipality of Tehran)", the income received from cooperation with private organizations, taxes on companies' income, and the price devoted to the given city services are among the most important mayoralties' income sources respectively (Nraqyan *et al.*, 2010).

Mahmudi and Zomorodian (2011) conducted a research titled evaluating the factors relating to the sustainable income of municipality of Tehran and ranking of the mentioned factors, declared that, according to the experts and decision makers of the taxes in municipality of Tehran, the most important income sources of municipality are land taxes, identifying and receiving taxes organization, financial relation of government and municipality, and accessibility to money and income respectively.

Shahri (2012) tried to identify and improve the sustainable income of municipality of Tehran, concluding the importance indexes roles in sustainability of 9-kind income sources and providing, in hope of achieving sustainable income, the basis of such a sustainable income and how to get it.

### **Research Questions**

1) Which income source is associated with the highest significance in income sources of the municipality?

The following questioned are posed in order to evaluate and answer the above-mentioned question accurately.

1.1. How the sources and micro-codes are ranked in the municipality?

1.2. What approaches are available to provide the municipality of Borazjan with improvement in terms of management?

1.3. On what basis is the income source of municipality of Borazjan based?

### **Research Hypotheses**

1) The average rank of each micro-code of the identified income source in municipality of Borazjan is different from others'.

2) The average rank of each income source in municipality of Borazjan is different from others'.

## **MATERIALS AND METHODS**

### **Research Methodology and Design**

The research methodology can be classified regarding either research purpose or data collection method. It is noteworthy that this paper, in terms of the purpose, is practical, leaving the data collection method to be descriptive survey method (Abbaszadeh, 2009). Practical approaches are those researches whose way of dealing with real issues are based on theories, regulations, and some other technical rules being used in basic researches. On the other hand, descriptive survey methods are mainly focused at describing and interpreting what exists, so it examines the present conditions, running processes, clear effects, and those processes on which the focus is being aimed more (Kazemi, 2009).

### **Population, Sampling Methodology, Sample Size**

Population of this research includes all members of Islamic council of Borazjan, the mayor, manager, authorities, and experts working on bringing income to the municipality of Borazjan. In this research,

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according to the finite population which is 143, the Cochran formula is used to determine the minimum sample size:

$$n = \frac{NZ_{\alpha}^2 p \cdot q}{e^2(N-1) + Z_{\alpha}^2 p \cdot q}$$

It is noteworthy that in this formula, the maximum error (e), population accuracy level, proportion of population success (p), and proportion of population failure (q) are 0.05, 0.95, 0.5, and 0.5 respectively. So, the n is as follow:

$$n = \frac{143 * (1.96)^2 * 0.5 * 0.5}{(0.05)^2 * 142 + (1.96)^2 * 0.5 * 0.5} = 104$$

Regarding the fact that n is 104, the number of sample in this research is supposed to be 105 which are randomly collected from among the mentioned population. Furthermore, all the members of population are equal in terms of having the chance to be chosen (Naing, 2006).

### Data Collection Tools

In this research, lots of tools are used to collect data among which questionnaire and interview are the most common. Considering the research purposes and the examined population, the questionnaire was based according to the Likert scale.

First, the data were collected from library studies, scientific database, review of the literature, interviewing the related experts, and legal income sources from all the mayoralties of the country. Then, we tend to collect data through the past records and documents, the existing rules and on the field method such as questionnaire. Having done these, 6 groups of continuous income sources were identified in municipality of Borazjan. It is noteworthy that each group is associated with some micro-codes. Finally, questions are put in a 40 location way.

### Data Analysis Methodology

This research has used some descriptive (frequency table and frequency percentage) and deductive methods.

Then, in hope of testing the hypothesis and ranking and determining the significance of each income source and micro-code, the non-parametric Friedman test and Kendall W test have been used. It is noteworthy that the SPSS22 analysis software has been also used to analyze the data.

### Ranking Each Micro-code of Income Source in Municipality of Borazjan

#### Friedman Nonparametric Hypotheses Test

$H_0$ : Average value of each micro-code of the identified income source of the municipality of Borazjan is the same.

$H_1$ : Average value of each micro-code of the identified income source of the municipality of Borazjan is different.

**Table 1: Friedman Nonparametric Test**

<b>Friedman test</b>	
N	105
Chi-Square	1206.020
Df	39
Asymp. Sig.	0.000

According to the table above and the results of the test, chi-square statistic can be quantified with 39 degrees of freedom and significance level test with zero that, considering the significant level being less than test error, is intended to show the rejection of  $H_0$ . The following table shows the average rating of each micro-code of the identified income, their rankings, the standing name for any of the micro-codes and the relevant income sources. The mean value, standard deviation, and minimum and maximum rates are shown in the descriptive statistics table of the micro-codes of the identified income sources.

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**Table 2: Ranking of the Micro-Codes of the Identified Income Sources**

Abbreviated	Micro-code income	Related income sources	Rank	Average rating
Code1000.3	Building license toll	Revenues from public events	1	31.6
Code3000.2	the sale of asphalt and crushing factories	Service price and profit of government-related institutes	2	31.26
Code6000.3	Function change toll	Donations from individuals and private organizations	3	30.11
Code6000.2	Commission fines of the part 100 of commission	Donations from individuals and private organizations	4	29.11
Code1000.7	Pollution toll	General toll	5	27.77
Code2000.4	Municipality 's share of profit gained from the country ministry	Special toll	6	26.91
Code1000.6	Modernization toll	General toll	7	26.84
Code1000.4	Ending of building's toll	General toll	8	26.69
Code1000.8	Toll of business licenses and the right to give license	General toll	9	26.15
Code6000.5	Fines of improper buildings, criminal offenses, etc.	Donations from individuals and private organizations	10	25.88
Code1000.16	Toll of city clubs	General toll	11	24.4
Code3000.5	sale of garbage (waste)	Service price and profit of government-related institutes	12	23.98
Code4000.4	Partnerships with the private sector in planning and economic development projects in the city	Income from funds and municipality property	13	23.84
Code1000.5	Toll of activity of the city	General toll	14	23.27
Code2000.1	parking removing toll	Special toll	15	23.19
Code1000.13	Toll of production units or sales	General toll	16	21.72
Code3000.1	Asphalting, removing spots and repairing the City	Service price and profit of government-related institutes	17	21:37
Code3000.3	The authorizing and selling plans of the city	Service price and profit of government-related institutes	18	21:35
Code1000.18	Toll of communication and transportation	General toll	19	21:19
Code4000.2	Income gained from renting machines and vehicles of the municipality	Income from funds and municipality 's property	20	20:44
Code3000.4	Income gained from providing the safety	Service price and profit of government-related institutes	21	20:34

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	services, bus and green space in the city				
Code1000.17	Toll of advertising agencies, associations, local press, and shops in the city	General toll	22	20:27	
Code4000.1	Municipality funds in the banks	Income from funds and municipality 's property	23	20:13	
Code1000.2	Value added (electricity, water, telephone, gas)	General toll	24	19:48	
Code6000.4	Fine of blocking passages	Donations from individuals and private organizations	25	19	
Code7000.1	The sale of immovable property	Other sources of funding	26	18.95	
Code7000.2	The sale of movable property and the old ones	Other sources of funding	27	17:08	
Code2000.5	toll of fire and other insurance companies	Special toll	28	16.91	
Code2000.3	Vehicle inspection toll	Special toll	29	16.6	
Code1000.9	Engineers share given to municipality because of inspection on buildings and other construction	General toll	30	16.4	
Code4000.3	Park Card toll	Income from funds and municipality property	31	15:37	
Code6000.6	unauthorized discharge of waste toll	Donations from individuals and private organizations	32	15.3	
Code2000.2	Pricing traffic card and services for heavy vehicles in the city	Special toll	33	14.6	
Code1000.1	Toll of official documents, certificates, passports	General toll	34	12.95	
Code1000.14	Fine for water release in the city	General toll	35	12.85	
Code6000.1	Citizens' help and the other received gifts	Donations from individuals and private organizations	36	12.69	
Code1000.11	Toll ATM	General toll	37	12:02	
Code1000.15	Toll of city clubs	General toll	38	11.8	
Code1000.10	Toll of carrying construction waste	General toll	39	11:26	
Code1000.12	Toll of student dormitories in the city	General toll	40	8.94	

**Ranking of Identified Income Sources in Borazjan**

Kendall's W Hypotheses Test

H<sub>0</sub>: Average level of each identified income source is Borazjan is the same as others'.

H<sub>1</sub>: Average level of each identified income source is Borazjan is different from others'.

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**Table 3: Kendall's W Testresults**

N	105
Kendall's W	0.127
Chi-Square	66.510
Df	5
Asymp. Sig.	0.000

The rating of each identified income source in Borazjan was done through Kendall's W test. According to the table above, the test results, and the amount Kendall's W test, the chi-square test is of 5 degrees of freedom and significance level test is zero that, considering the significant level being less than the test error is a sign of rejection of  $H_0$ .

The following table shows the average grade for each of the identified sources of income. The ranking of the identified income sources, the mean value, standard deviation, and minimum and maximum rates are shown in the table of descriptive statistics.

**Table 4: Ranking the Identified Sources of Income**

Abbreviated	Sources of income	Rank	Average rating
Code 3000	Service price and income gained from government-related institutes	1	12.85
Code 6000	Donations and donations from individuals and private organizations	2	12.69
Code 4000	Income from funds and municipality's property	3	12:02
Code 1000	General toll	4	11.8
Code 7000	Other sources of funding	5	11:26
Code 2000	Special toll	6	8.94

### Research Analysis and Suggestions

In this research, based on the review of the related articles, journalists', experts', and authorities' opinions, the continuous income sources of municipality of Borazjan was identified. The 40 micro-codes are classified into 6 groups of income sources. Then, the significance of each micro-code was determined by means of the questionnaire given to the experts. Having the collected data analyzed, the service price and the income obtained from municipality government-related institutes are the most important income sources of the municipality of Borazjan, leaving the people's donation and private organizations, municipality's properties, general (taxes) toll, other credit supplies, and special tolls (taxes) respectively the other income sources.

Furthermore; the 5 important known micro-codes are claimed to be: building license toll, selling the products of Asphalt and crushing factories, functional exchange toll, fine of the commission part 100, and pollution toll.

In addition, according to the finding and present insight, the structure of income source of municipality of Borazjan can increase through inside sources (code 3000-service price and income obtained from municipality's government-related institutes) and micro-codes (building license toll, selling the products of Asphalt and crushing factories, and functional exchange toll).

### Research Suggestions

According to this research and the previous insight, it is clear that the municipality of Borazjan has the capacity to reach the continuous and regular income; hence, the suggestions are as follow:

#### *Code 1000- Income Gained from the General Toll*

Considering the income gained from the general toll being the most important and continuous income of the municipality, it is suggested that the license price, being devoted to mansion, industrial, commercial and office-related functions, be adjusted with regard to the function, economic issues, value added, appropriate toll and be given to the city's Islamic council to be authorized. Furthermore, the building-

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related tasks can be given to private sectors such as police +10, government service representatives in the city.

### *Code 2000- Income Gained from Special Toll*

The municipality can use some kinds of trade-card to be given to the vehicles. This is because municipality pays a lot of money to build the city's infrastructure. So the mentioned card, given to tractors, heavy vehicles etc. can increase the income.

### *Code 3000- Service Price and Income Gained from Government-Related Institutes*

Considering selling the products of Asphalt and crushing factories, in hopes of bringing satisfaction to customers, in terms of service quality, municipality can advertise largely in the city; Furthermore, having identified those mayoralties without these products, it is possible to sell these products to them.

### *Code 4000- Income Gained from Municipality Property*

Considering the income gained from the private sectors, it is suggested that the places with civil and economic capacities be found in the city so that municipality could bring private sectors to invest.

### *Code 5000- Government and Governmental Organization Donation*

In comparison with large cities, the donation of government and government-related organizations to municipality of smaller cities is less. This is due to the fact that government requires the municipality of the small cities to be self-reliant.

### *Code 6000- Private Sectors' and People's Donation*

It is suggested to change the function through the following:

1) Keeping staff of the municipality and members of the Islamic council educated in terms of rules and the regulations of the toll.

2) Adjusting the toll according to the function in terms of how high the value is.

### *Code 7000- other Credit Supply*

Considering selling the properties, it is suggested that the selling be economically justified and be given some specific permit from ministry of the country. For example, if the municipality has two lands, one being good in terms of commercial position and the other not food, in hope of gaining some income in future, the municipality should sell the bad one.

## **Suggested Approaches in Terms of Time**

### *Short-term Approaches*

1) Management of reducing the price, exemption, ignoring some parts, and gifts that is present in municipality.

2) Building a place to gather all experts' opinions together.

### *Medium-term Approaches*

1) Fascinating the private sectors to invest by means of decent methods.

2) Taking back the citizens' debts in hope of economic growth and fulfillment of municipality duties.

3) Making the municipality equipped with new systems such as geographical data and some automatic software with regard to the city being able to attract the tourists and giving fast and accurate services to them.

4) Providing a distinctive manual for mayor to consider identifying the postponed municipality income with at least 22 items municipality requires.

### *Long-term approaches*

1) Hiring experts in municipality duties and providing a structure which suits both the staff and the municipality.

2) Adjusting the imposed tolls regarding the city's economic state.

3) Trying to determine the land's ownership document.

4) Keeping the people aware of how to live in a city through public relation of the municipality, providing a culture committee, advertising in the city, and advertising in the local newspaper.

## **Discussion and Conclusion**

Among the different parts of city management, income supply and municipality 's income are of a great importance because not only it influences the services given to citizens, but also, on the other hand, due to

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income insufficiency, city would be associated with improper city services or problems in running projects if the income is not decent; Hence, this paper, considering the related documents and experts', journalists', and masters' opinions, the continuous income sources of the municipality compatible with municipality of Borazjan were identified. The 40 micro-codes were classified in 6 groups. Then, these groups, through the questionnaire given to experts, were ranked. This paper has used non-parametric Friedman analysis test and Kendall's Wtest. Having done the analysis, the most important continuous income sources are service price and income gained from government-related institutes in municipality of Borazjan, leaving the people's and private organizations' donation, municipality properties, public toll, other credit supply, and special toll respectively as the other continuous income sources. Also, the 5 micro-codes are as follow: Building license toll, income gained from selling the product of Asphalt and crushing factories, changing the function, fine of the commission part 100, and pollution toll. Finally, according to the findings and present insight, the structure of income source of municipality of Borazjan increase through inside sources (code-3000-service price and income- obtained from municipality's government-related institutes) and micro-codes (building license toll, selling the products of Asphalt and crushing factories, and the functional exchange toll).

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