

Determining and Prioritizing Tax Policies Affecting the Economy and Tax Revenues

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Abstract: Tax is considered an undeniable reality in human societies. This fact exists in rich countries with natural resources as well as the ones lacking such wealth. Today, one cannot study an economy in the world that does not recognize tax as a contributing factor. In Iran, according to the fourth development plan, credit costs should be supplied from non-oil sources, and according to statistics, achieving this goal seems difficult. Presence of effective tax policy is one of the important factors in achieving tax goals. However, formulation of these policies is a multidimensional and difficult task and requires benefitting from collective wisdom of main beneficiaries of tax in various sectors of economic activities. The purpose of this study is to develop policies to increase tax revenues of the government, their evaluation, and the quality of effects of policies on economy. For this purpose, we tried to identify the policies and study their effects in form of Delphi process and multiple targets using tax-economy experts' views. Moreover, because of differences in perceptions of the words low, medium and high, we studied the responses of the experts as fuzzy numbers. Delphi process was conducted in the study with multiple goals, ended after three stages, experts reached a consensus over their views, and identified appropriate policies to increase tax revenues and improve economy. Experts examined each of the proposed policies separately, and their opinions about the intensity of effectiveness were evaluated using Delphi method, so that the experts reached consensus at the end. Using Fuzzy Analytic Hierarchy Process (AHP) and Fuzzy Delphi, we ranked effective tax policies. The results of this study have explained priority of tax policies to achieve the purpose of economy.

Keywords: tax policies, tax revenues, economy, Fuzzy Delphi, multi-criteria

INTRODUCTION

Existing the effective and efficient tax policies is one of the important factor in achieving the goals of taxation. Tax policies are very effective in ways of public investments and redistribution of income (European Commission). But, these policies should be formulated in such a way that by increasing tax revenues may cause no public dissatisfaction and have no undesirable impact on country's economy in terms of inflation and unemployment and the like. Therefore, formulation of tax policies is a multidimensional and difficult activity and it requires the use of collective wisdom of tax main interests' shareholders in various sectors of the economy. Unfortunately; at the present, guidelines of tax revenues is so strict that the taxpayers of society avoid somehow paying taxes and they are looking for a series of ways to pay less taxes. This is because, it is just classical form comes to earn tax revenues. Increasing the share of taxe policies is one of the effective and important factors in achieving the goals of taxation, so; formulation of tax policies is a multidimensional and difficult activity and difficult activity and it requires the use of collective wisdom of tax policies is one of the effective and important factors in achieving the goals of taxation, so; formulation of tax policies is a multidimensional and difficult activity and it requires the use of collective wisdom of main tax interests' shareholders in various sectors of the economy. Given to mentality of tax's elites, they have different interpretations of the concept of tax policies and the rate of its impact on the economy. Based on it, fuzzy Delphi model and multi-criteria decision and fuzzy theory are used in this

article for modeling and prioritizing in tax policies under uncertainty conditions. The aim of this study is to design a fuzzy multi-criteria model to prioritize strategies to increase tax revenues in Yazd province, the information which is needed to model will be provided by Economic and Financial Affairs Administration of Yazd province. Thus, there is a large distance between current situation and desired situation (situation in the countries of the world whose economy is not dependent on the mineral assets) for tax collection that this matter requires bold planning for extensive and profound evolutions. Consequently, designing and formulating of tax's policies is a multi-dimensional and difficult and dangerous activity and creates a great impact on economic and social relations. Therefore, the nature of the problem is in such a way that to achieve objective achievements requires consultation and cooperation of scholars and elites in various sectors of society, so as a result of their thinking in framework of five-year policies programs notified to the government and ultimately to the State Tax Affairs Organization.

Tax Affairs Organization believes that by optimal execution of tax laws and achieving the goals of the government's tax can have an effective role in order to achieve healthy and sustainable economic in the country (Ministry of Economic and Finance Affairs, 2005). Meanwhile, proposed tax policies needed a relatively clear view of future events along with deep thinking and reflection on economic and social issues which seems insufficient in a few limitations of time. Furthermore, such experience has not been happening for at least past two generations and requires individual and group challenges to achieve a unit view. On the other hand, each one of the tax main interests' shareholders based on their understanding and perception of proposed items, have different interpretations of the concept of tax policies and the rate of its impact on country's economy and prioritizing its implementation. Tax interests' shareholders have different views in terms of their role and position which is very necessary for correct understanding of the problem without personal and professional bias and rational and fair systematic design. The impact of suggested issues on the economy and their priority cannot be analyzed through deterministic methods or through random processes. In fact, due to the large dimensions of under review problem, the accurate and complete information cannot be accessed. This study aimed to determine and prioritize the country's tax policies through collective wisdom. Therefore, Delphi method is used. However, due to features such as macro dimensions of the problem, inaccessibility to accurate information and personal and mental opinions of each one of the tax's main interests' shareholders the Fuzzy theory must also be integrated into it. Therefore, fuzzy Delphi method is used to create the necessary interactions between elites and stakeholders of interest in order to lead their insights toward a general consensus.

2. Challenges of state tax system regarding its pillars

2.1. Capacities and existing barriers in national product and income distribution

Combined GDP is an important factor in influencing economic policy objectives and income taxes. Studies show that during development plans, service sector accounts for the highest share in the country's economy. For example, service sector, on average, during the Fourth Development Plan (2005-2010) has accounted for 48.8 percent and the share of oil, agriculture, industries, and mines sectors has been, respectively, 24, 9.4 and 17.8 percent.

By studying GDP composition and calculating value added of tax different bases during the Fourth Development Plan, we can see that despite the fact that value added of jobs in 2010 has been an average of 28.7 percent of GDP, they have paid meager tax. The share of taxes paid by this sector of income tax has been only 8.2 percent. During this course, legal entities (without oil) that have a share equivalent to 23.7% of GDP have accounted for 69% of income tax. Finally, in the mentioned period, agricultural sector has a share as 9.4 percent of GDP, while it has been largely exempted from taxation. Due to the transparency of the financial activities, legal entities bear the highest tax burden in the country's economy. In contrast, lack of transparency of financial circulation of economic actors in business, cash transactions rather than electronic and commitment transactions, lack of access to turnover information of actors in services and jobs sectors, informal activities, or non-registration of many activities increase tax evasion in this sector (Jafari, 2007).

2.2. Functions of tax in country's economic system

In economic literature, three major targets have been considered for taxation. Purpose of taxation is setting tax that governs the financing of state budget through taxes. Economic objectives govern stabilizing economic fluctuations in stagnation and inflation conditions and allocation of resources between various economic sectors through tax policies, and ultimately social objectives that govern the redistribution of income in society and reduce the gap by means of tax. Three functions of taxation in taxation system of the country have been studied (Abrishami et al., 2002).

Budget functioning of tax

Based on the performance, the dependence of main indicators of the state tax-system budget on oil revenues has imposed lot of problems to the economy of the country. Of these problems, one can mention to imbalance of the operating budget and the increase in liquidity and inflation, so that cover all current expenses of the government during the fourth development plan, of government tax revenues, the ratio of tax to GDP should have been an average of 16.5 percent. In fact, this ratio is a desirable tax ratio that the government should have achieved from tax revenues to cover its operating costs for job creation (Askari, 2013).

Financial functions of tax (economic management tool)

The second function of tax in economy is financial policy making. Governments sometimes use tax policies, such as reducing tax rates, establishing exemptions and granting other types of incentives to support production, resource allocation or consolidation economic fluctuations to support investment, production, and employment in certain sectors. Because of time-consuming nature of the process of proposing reform in tax laws in Iran, financial functioning of tax is limited. In Iran, one of the reasons of weak role of tax in economic policymaking is limited tax base and therefore not taxable significant portion of GDP. Therefore, the effectiveness of economic policy making through tax depends on the extent of the tax base, the rate of application and enforcement of tax policy done often in many countries through annual government budgets, which is essential to be taken into consideration in Iran as well (Fallahi et al., 2006).

Social functions of tax (redistributing income and wealth in society)

Another function of taxes is the social arena where the government uses tax tool to reduce class gap and increase social equity. Equal treatment to all those who have the same ability to pay (horizontal equity) and different tax treatment with those with different income (vertical equity) are of the most important tax policies in social field and income redistribution. Studying tax laws and regulations of the country shows that it is necessary to observe aspects of tax justice. Obviously, achieving a favorable tax system that besides financing of the state budget and equality and justice can guarantee economic growth and stimulate economy depends on the performance of forming elements of the tax system i.e. national production, tax laws and regulations and tax collection. By strengthening national production, reforming the legal mechanisms, and ultimately, strengthening tax collection agency, one can be hopeful to improve the functioning of the tax system of the country. Besides reviewing the most important obstacles to actualize economic capacity of tax in the country, we will explain requirements and reforms needed to realize tax revenues set (Fallahi et al., 2006).

2-3. literature review

Castalls et al. (2001) studied the estimation of tax capacity of local governments in Spain. The data of time period 1993-1999 were used in this study. By estimating tax capacity of local governments in Spain and by using econometric OLS methods they have reached to this conclusion that, instead of reducing in tax capacity, 35% of these shocks is covered by public expenditures reduction, 25 percent by increase in taxes and remaining (40%) due to increase in debt levels.

Nagy (2001) in a research by utilizing time and sectional series data from 16 Arab countries (these countries have classified into three groups of member of Persian Gulf Cooperation Council, non-oil and total) had declared during 1994-2000 that most of Arab governments had faced with problem to generate sufficient revenues for public expenditures and they may face a deficit. Author considered the aim of this study to compare the tax effort among Arab countries and in the research hypothesis, he has stated that the important factors determining tax revenue share in gross domestic product (GDP), are per capita income, the share of the agricultural sector and share of the mining sector in GDP.

Manas and Anton (2010) by using data from 39 countries in the period of (1973-2008) showed that there is a negative relationship between ratios of income tax to total tax revenue and gross domestic product and economic growth rate. Martin and Fardmanesh (2012) by using information from 76 countries in time period of (1972-2009) concluded that there is a negative relationship between ratios of income tax to gross domestic product and economic growth rate. Gokan (2013), in an article analyzed the effect of taxation on labor and capital on existing uncertainty of the economic factors and found that taxes on labor and capital have negative impact on the existing certainty in economic and in the other hand, each one of these two types of taxes influences on economic variables in different way. Bonshka and Kumansyo (2013), in an article calculated tax elasticity to gross domestic product in Romania and compared elasticity changes of tax revenues with other European countries in descriptive form. Gali (2014) analyzed the relationship between government expenditures and sources of funding and economic growth in Tunisia. He concluded with a vector error correction model that the relationship between government spending and economic growth depends on the sources of financing government expenditures. So that if government spending is financed through borrowing, the relationship between government spending and economic growth is negative, but if government spending financed by taxes, the relationship between government spending and economic growth is positive.

3. Methodology

Methods

This paper is applied in terms of purpose. The aim of research is applied, development of practical knowledge in a particular field. Regarding methodology and the nature, it is correlational. This study aimed to determine the relationships between variables. For this purpose, based on scales of measurement of variables, proper indicators or questions are adopted. The method of the study is deductive-inductive reasoning, data collection to confirm or reject the hypotheses is done in inductive form, and finally, we will use questionnaires, interviews with experts, or field method.

Population

The study population consisted of managers, experts, and policy makers in the field of taxes and the economy of Yazd.

Data collection

We have used library method to formulate hypotheses and to provide literature. In this regard, we have studied scientific articles published in the prestigious domestic and international journals, academic and scientific research and promotional scientific books and theses in the field of accounting related to both international and domestic research. Research data have been collected through interviews with experts and collecting questionnaires for the period from March to December 2015. Unfortunately, controlling Delphi validity and reliability is not easy because due to lack of evidence of reliability, Delphi has been heavily criticized. In other words, if similar information or the questions are given the same panelists, obtaining the same results is not certain. Although users of Delphi have confirmed the accuracy of this technique, this technique has also been criticized in terms of validity. However, if members participating in the study are the representative of the intended group or knowledge, content validity is guaranteed. However, perhaps, all of the above cases may be the case in qualitative research. Delphi approach should not be judged with quantitative approach, and the use of transferability, credibility, usability, and verifiability criteria for validity and reliability of the results may be more accurate. Considering that

questionnaire is designed as Likert scale, the most appropriate method for calculating the reliability is Cronbach's alpha coefficient. Thus, using Cronbach's alpha and collected questionnaires, Cronbach's alpha value was 0.68. Since it is almost equal to 0.7, its reliability is acceptable.

Table 1: Cronbach's alpha coefficient

| Reliability Statistics | | | |
|---|--------------------------------|--|--|
| Cronbach's | | | |
| Alpha | N of Items | | |
| | 90 | | |
| .828 | 28 | | |
| .828 Reliability f | 28 Statistics | | |
| .828 Reliability S Cronbach's | 28 Statistics | | |
| .828 Reliability Cronbach's Alpha | 28 Statistics N of Items | | |

Data analysis

In the present study, using the document of development plans as well as the policies of Tax Administration, we collect the proposed policies, and using Fuzzy Delphi and the views of economic-tax experts of the province, the effect of each extracted criteria for economy and increase of tax revenues are determined. To determine the final weight of each policy in increase of tax revenues, we have used fuzzy AHP method with economy sub-criteria.

4. Findings of research

This chapter aimed to determine an appropriate tax policy by using Delphi and AHP fuzzy method and investigate their impact on economy and ultimately on tax revenues by using elites' views. In general, analysis applied in order to regulate and summarizes the data in form of clear, legible, reasonable and interpretable information so that the relationships existing in research problems can be discovered, analyzed and tested. In order to investigate research hypothesis, the questionnaire is distributed among elites:

- How much influence does tax policies' have on economy?

4.1. Steps of Delphi method process

First step

Given to the proposed options and linguistic variables defined in previous section, the intended questionnaires were designed. After distribution and collection of questionnaires two new suggestions have also been received. The results of elite's view about each one of the policies in the first questionnaire are shown in Table 2:

Table 2: the result of counted votes of first step questionnaire

| order | Tax policies | Impact |
|-------|--------------|---------|
| | | on |
| | | economy |

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| | | Low | Medium | High |
|---|----------------|-----|--------|------|
| 1 | A1 | 1 | 1 | 22 |
| 2 | A ₂ | 18 | 8 | 2 |
| 3 | A ₃ | 11 | 5 | 14 |
| 4 | A4 | 2 | 7 | 10 |
| 5 | A5 | 3 | 9 | 13 |
| 6 | A ₆ | 4 | 2 | 20 |
| 7 | A ₇ | 3 | 8 | 12 |
| 8 | A ₈ | 2 | 4 | 22 |

Along with collecting the questionnaires, four suggestions were also received as follows:

A9. Expanding, creating and using databases of payers' economic activities

A10. Boosting the expertizing and supervising power of interior auditor

A11. Eliminating non-economic tax and reducing operation costs

A12. Applying tax on total revenues

Based on the results of questionnaires collected from 30 elites who have cooperated to implement research, the average of each of measures, it means impact on the economy, are calculated. The average of every one of criteria is listed in Table 3:

| Table 3. Average | votes of first step | questionnaire |
|------------------|---------------------|---------------|
|------------------|---------------------|---------------|

| order | Tax policies | Impact on economy |
|-------|----------------|-------------------|
| 1 | A ₁ | [6,9,2,9,1,8,9,5] |
| 2 | A_2 | [1,5,3,3,4,2,3,1] |
| 3 | A ₃ | [8,7,8,5,6,4,7,3] |
| 4 | A ₄ | [9,8,2,7,6,5,8,4] |
| 5 | A ₅ | [3,6,4,5,7,4,7,3] |
| 6 | A ₆ | [7,9,7,8,4,7,1,6] |
| 7 | A ₇ | [9,7,4,6,7,5,3,4] |
| 8 | A ₈ | [1,9,9,7,8,6,9,5] |

Second step

Initial questionnaire of study was distributed at this step of the research and elites' views about any of the policies and influencing on each one of the criteria were measured and total average of views was calculated as well. In the next step of the Delphi process, we must send feedback of views to elites, in the way that we send to every person the differences of opinions of each one of the elites to the average of opinions. Given that numbers are in fuzzy form we must calculate the difference from average for each one of the elites. Now, based on the results, another questionnaire can be set in which the calculated difference related to each elites is recorded in it. In this case, based on a reassessment of every elite from his/her previous opinion, the new results can be achieved. The results from this new questionnaire are presented in Table 4.

 Table 4: the results of counted votes of second step questionnaire

| order | Tax policies | Impact |
|-------|--------------|--------|
| | | on |

| | | economy | | |
|----|-----------------|---------|--------|------|
| | | Low | Medium | High |
| 1 | A1 | 0 | 2 | 25 |
| 2 | A ₂ | 13 | 2 | 4 |
| 3 | A ₃ | 1 | 3 | 20 |
| 4 | A4 | 0 | 5 | 23 |
| 5 | A5 | 2 | 19 | 5 |
| 6 | A ₆ | 2 | 7 | 20 |
| 7 | A ₇ | 4 | 8 | 15 |
| 8 | A ₈ | 1 | 6 | 22 |
| 9 | A9 | 2 | 0 | 26 |
| 10 | A ₁₀ | 2 | 0 | 27 |
| 11 | A ₁₁ | 2 | 2 | 24 |
| 12 | A ₁₂ | 3 | 0 | 25 |

Now, we calculate the average of views. The results of the average of elites' view are presented in Table 5:

Table 5. Votes' average of elites in second step

| Order | Tax policies | Impact on economy |
|-------|-----------------|--------------------|
| 1 | A ₁ | [7,9,6,9,9,7,9,5] |
| 2 | A ₂ | [7,4,4,2,2,1,5,0] |
| 3 | A ₃ | [9,6,7,9,5,8,4] |
| 4 | A ₄ | [3,9,9,7,8,6,9,5] |
| 5 | A_5 | [1,7,7,6,2,5,6,4] |
| 6 | A_6 | [6,9,5,8,4,7,3,6] |
| 7 | A7 | [3,7,7,6,2,5,2,4] |
| 8 | A ₈ | [7,9,9,8,5,7,7,6] |
| 9 | A9 | [3,6,1,5,6,4,5,3] |
| 10 | A ₁₀ | [2,6,3,,7,1,8,5,9] |
| 11 | A ₁₁ | [4,5,6,7,2,8,5,9] |
| 12 | A ₁₂ | [4,9,8,7,9,6,7,5] |

The questionnaires were distributed among elites twice until the present step of research and their views were collected and meantime elites filled the second questionnaire with knowledge of the views of the majority. Now, we calculate the mean difference in order to investigate whether consensus has been reached or not? Or in other words in order to investigate the views whether consensus has been reached or not in the rate of effectiveness of policies. Now, if this mean difference reached less than the threshold of 0.2, the process will be suspended and consequently elites reach a consensus. The results of mean difference are presented in Table 6:

Table 6. First and second step of mean difference of votes

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| Order | Tax policies | Impact on |
|-------|-----------------|-----------|
| | | economy |
| 1 | A1 | 0,07 |
| 2 | A ₂ | 0,32 |
| 3 | A ₃ | 1,35 |
| 4 | A4 | 0,85 |
| 5 | A ₅ | 0,87 |
| 6 | A ₆ | 0,02 |
| 7 | A ₇ | 0,22 |
| 8 | A ₈ | 0,77 |
| 9 | A9 | - |
| 10 | A10 | - |
| 11 | A ₁₁ | - |
| 12 | A ₁₂ | - |

As shown, mean differences is more than 0, 2; therefore, it can be said that at this stage of the fuzzy Delphi process, consensus has not been achieved.

Third step

In the following, we send to every elite the views differences of his/her with average of views and he will be voted again. This process has to be continued as far as the consensus to be achieved. The results of counted vote in third step are in form of Table 7.

Table 7: The results of counted vote in third step

| order | Tax policies | Impact | | | |
|-------|----------------|--------|---------|------|--|
| | | on | | | |
| | | | economy | | |
| | | Low | Medium | High | |
| 1 | A1 | 0 | 0 | 28 | |
| 2 | A ₂ | 18 | 4 | 0 | |
| 3 | A ₃ | 0 | 3 | 26 | |
| 4 | A4 | 0 | 3 | 24 | |
| 5 | A5 | 1 | 24 | 0 | |
| 6 | A_6 | 0 | 2 | 26 | |
| 7 | A7 | 0 | 21 | 6 | |
| 8 | A8 | 0 | 1 | 28 | |
| 9 | A9 | 1 | 0 | 24 | |

| 10 | A ₁₀ | 0 | 0 | 27 |
|----|-----------------|---|---|----|
| 11 | A ₁₁ | 0 | 1 | 27 |
| 12 | A ₁₂ | 0 | 0 | 28 |

Three questionnaires have been distributed until this step of research and we provided the results of counted votes of elites in Table 7. We will also provide the view averages of elites in fuzzy numbers form in table 8:

| Table 8 | . The | average | of votes | in | third | step |
|---------|-------|---------|----------|----|-------|------|
|---------|-------|---------|----------|----|-------|------|

| Order | Tax policies | Impact on economy |
|-------|-----------------|--------------------------|
| 1 | A1 | [7,9,1,9,9,7,7,5] |
| 2 | A ₂ | [6,4,1,2,3,1,7,0] |
| 3 | A ₃ | [1,9,4,8,5,5,3,4] |
| 4 | A4 | [4,9,8,7,6,6,4,5] |
| 5 | A ₅ | [7,7,6,2,5,4,4] |
| 6 | A ₆ | [7,9,4,8,8,7,5,6] |
| 7 | A ₇ | [6, 7, 6, 6, 3, 5, 5, 4] |
| 8 | A ₈ | [6,9,7,8,8,7,8,6] |
| 9 | A9 | [5,7,3,5,5,4,2,3] |
| 10 | A ₁₀ | [1,6,6,7,2,8,4,9] |
| 11 | A ₁₁ | [7,9,8,8,3,7,5,6] |
| 12 | A ₁₂ | [5,9,1,8,5,6,8,5] |

The questionnaire has been distributed among elites during three steps until this fuzzy Delphi process and results were collected, along with distribution of second step questionnaires the differences of opinion of elites from averages of votes was sent to every elite so that he may to be informed of majority of votes and to adjust his/her opinions with respect to it. After this step, we saw that given to the mean difference of opinions between first and second step, the opinions did not reach consensus. Thus, we distributed questionnaires among elites for third time and sent to them their mean difference with average of votes as well. Then questionnaires were collected and the numbers of ballots were counted and the average of them is visible in the above table. Now in order to measure this issue whether elites have reached consensus or not, we calculated mean differences of votes in second and third steps that its results are visible in Table 9. If this difference is less than 0, 2, it can be said that consensus has been reached and Delphi process has been finished.

| Table 9. Mean difference of elites' votes in see | cond and third step | |
|--|---------------------|--|
|--|---------------------|--|

| Order | Tax policies | Impact on |
|-------|----------------|-----------|
| | | economy |
| 1 | A1 | 0,17 |
| 2 | A ₂ | 0,02 |
| 3 | A ₃ | 0 |
| 4 | A4 | 0,17 |
| 5 | A5 | 0,07 |

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| 6 | A ₆ | 0,1 |
|----|-----------------|-------|
| 7 | A7 | 0,15 |
| 8 | A ₈ | 0,02 |
| 9 | A9 | 0,01 |
| 10 | A ₁₀ | 0,19 |
| 11 | A ₁₁ | 0,017 |
| 12 | A ₁₂ | 0,02 |

As is shown, the mean difference in the table is less than 0.2. Thus, Delphi process is suspended and we can say that at the end of this stage consensus has been achieved. The rate of every one of tax policies on economy has been considered so far. To determine the effect of every one of policies on increasing tax revenues, the effect of each component on tax revenues should be measured. Based on it, the weight of the economic components to be determined at this stage and finally by helping AHP the effect of every polices on tax revenues is being measured.

4-2. determining the effective tax policies

Analyzing the effect of economy on increasing tax revenues using fuzzy Delphi method

Given to the fourth hypothesis of research, a questionnaire was designed in this part and the elites from previous part were asked to assess the effect of economic criterion on increasing tax revenues. The assessment process of this questionnaire is also as like as previous questionnaire and elites' views are being assessed using fuzzy Delphi method.

First step

In first step, after distributing questionnaires and collecting them, the results are available in Table 10:

Table 10. The result of counted votes in first step

| Criterion | | elites' | |
|----------------------|-----|---------|------|
| | | views | |
| | Low | Medium | High |
| effect of economy on | 3 | 9 | 17 |
| increasing tax | | | |
| revenues | | | |

The average of views is calculated by using fuzzy method and are presented in Table 11:

Table 11: Average of votes in first step

| 0 | 1 | |
|-----------|------------------------------------|-------------------|
| Criterio | n | elites' views |
| effect of | economy on increasing tax revenues | [9,8,9,7,8,6,6,5] |

Second step

At this step, the differences of opinion of every one of elites with average views of other elites is sent to him and he is asked to restate his views considering the other elites' views. After collecting the questionnaires of second step the results of counted votes and average of votes are presented in Table 12.

Table 12. The result of counted votes in second step

| Criterion | elites' views | | |
|--|---------------|--------|------|
| The effect of economy on increasing tax revenues | Low | Medium | High |
| | | | |
| | 1 | 3 | 25 |
| | | | |

The average of votes is presented in Table 13:

Table 13: the mean of elites' votes in second step

| Criterion | elites' views |
|--|-------------------|
| The effect of economy on increasing tax revenues | [1,9,7,7,9,6,8,5] |

At the end of second step, we calculated difference in means in first and second steps that results are presented in Table 14:

Table 14: mean differences of elites' votes in first and second step

| Criterion | mean differences of elites' views |
|--|-----------------------------------|
| The effect of economy on increasing tax revenues | 0,07 |

Given that mean difference of elites' views is less than 0, 2 in first and second step, thus Delphi process is over at the end of second step. The result of this study showed that economy has wide range of impact on tax revenues. We obtained the average of final votes in Tables 8 and 13 and showed them in Table 15.

Table 15. Average of final votes

| Order | Tax policies | Impact on economy |
|-------|-----------------|---------------------------|
| | | |
| 1 | A1 | [3,88,70,5,54,6,33] |
| 2 | A ₂ | [9,41,2,16,9,8,1,4] |
| 3 | A ₃ | [9,82,7,64,9,37,9,24] |
| 4 | A ₄ | [5, 85, 60, 5, 45, 3, 31] |
| 5 | A5 | [7,63,6,51,9,35,5,25] |
| 6 | A ₆ | [3,88,7,64,8,53,7, 37] |
| 7 | A ₇ | [2,69,8,50,6,36,1,26] |
| 8 | A ₈ | [4,87,9,66,8,53,4,39] |
| 9 | A9 | [3,68,8,40,31,6,18] |
| 10 | A ₁₀ | [5,55,5,58,6,56,5,54] |
| 11 | A ₁₁ | [3,88,8,67,4,50,7,37] |
| 12 | A ₁₂ | [5,86,4,62,9,44,6,33] |

Then by using data from Table 15, we summed Fuzzy numbers of each policy together and then from obtained Fuzzy numbers collections in Table 16, the numbers were defuzzed and ultimately the numbers of tax policies were ranked that are presented in Table 16.

| Order | Tax policies | Total of fuzzy numbers | defuzzition of | Ranking of tax |
|-------|-----------------|---------------------------------|----------------|----------------|
| | | | Numbers | policies |
| 1 | A1 | [5,220,5,174,7,123,1,72] | 148,2 | 1 |
| 2 | A ₂ | [5, 90, 1, 52, 2, 25, 5, 8] | 42,3 | 12 |
| 3 | A3 | [206, 7, 149, 98, 9, 61] | 127,2 | 8 |
| 4 | A ₄ | [9,212,7,157,5,115,3,75] | 139,1 | 6 |
| 5 | A_5 | [5, 140, 5, 143, 5, 79, 5, 50] | 106,2 | 9 |
| 6 | A ₆ | [6,221,7,162,7,123,80] | 145,7 | 2 |
| 7 | A7 | [8, 159, 6, 115, 2, 82, 51] | 101,1 | 10 |
| 8 | A ₈ | [82, 9, 124, 5, 161, 3, 217] | 145,3 | 3 |
| 9 | A9 | [3, 161, 7, 100, 73, 7, 43] | 92,1 | 11 |
| 10 | A ₁₀ | [1,171,9,151,2,128,6,101] | 138,8 | 7 |
| 11 | A ₁₁ | [2, 190, 7, 155, 3, 126, 1, 98] | 142,1 | 4 |
| 12 | A ₁₂ | [6,217,4,156,5,117,77] | 140,4 | 5 |

Table 16. Ranking of tax policies

Discussion and conclusion

Given that taxation has been proposed as an undeniable reality in human societies and tax revenues are more stable than other incomes in the views of economists, the importance of development of this type of income for the government can be high-imagined, therefore; the aim of this study is to provide policies to increase government's tax revenues and the other aim is to determine the efficiency of this policies in economy as well.

Expansion of tax revenues through the implementation of new taxes

Given to elites' view, the impact of this policy on the economy and increase in tax revenues is placed in wide range, therefore; we can say that the implementation of new taxes and expanding tax revenues can affect economy. Governments can create jobs' opportunities by tax revenues or in negative side by tax for low-income jobs it can cause them to lose.

Increasing the ratio of tax revenues to gross domestic product

From the view of elites, this policy cannot have a major impact on the economy and increase in tax revenues and their views indicate the low impact of this policy on economy. Therefore, increasing the ratio of tax revenues to gross domestic product cannot be a solution for economy. For more explanation, it can be said that increase in tax revenues to gross domestic product can be caused by reduce in production which is not desirable for economists; meanwhile, this policy is desirable if gross domestic product to be increased.

Reducing tax burden from manufacturing and investment sector to consumption tax

According to elites' view, this policy could have a major impact on the economy, as consensus of elites' view indicates the great impact of this policy on economy and increase in tax revenues. Thus, this policy can be an important policy to increase tax revenues. Manufacturing and investment sector are productive engines of economy and imposition of tax burden on these sectors can cause economy to be faced with depression of production and investment, thus; the best strategy to increase tax revenues is shifting the tax burden from these sectors to consumption sector.

Reviewing or improving tax laws

Reviewing tax laws has a major impact on the economy and increase in tax revenues from the view of elites. This result can stem from tax weaknesses in which elites are well aware of them. Thus, this policy is also considered as a policy affecting the economy.

Preventing the enactment of new tax exemption with aim to increase tax revenues and reducing complexity, tax's evasion and tricks

In the view of elites, this policy and preventing the enactment of new tax exemption cannot have a significant impact on the economy and increase in tax revenues, thus this policy can be discarded from categories of effective policies on economy. Tax exemptions have been reduced in recent years but it has been observed that this reduction has left no great impact on the economy and on the other hand, more tax exemptions belongs to cultural and religious parts that based on elites' view, taxation on these parts could not have any impact on economy and it may have much more negative and side effects.

Reducing distance between actual tax revenues and potential tax revenues

In the view of elites, the distance between actual tax revenues and potential tax revenues is high and reducing this distance can have a large impact on economy and increase tax revenues. In developed countries, although they have no natural resources, there are different types of taxations, but in our country due to reliance of government on oil revenues, less attention is given to tax and its foundations and thus tax foundations have great ability to expand.

Developing and promoting self-reported method in order to respect for payers in paying tax and reduce in tax collection cost

In the view of elites, promoting self-reported method and respect for payers to pay tax could have a great impact on economy and increase in tax revenues and it causes tax collection costs to be reduced. Unfortunately, due to the over dependence of government on oil revenues and supplying current budget by these revenues, the culture of people to pay taxes has been influenced by it and tax payers are less accustomed to pay taxes and have less respect for this financing method of government. Thus, elites have reached consensus in this promotion policy and all of them voted for high impact of this policy on economy.

Promotion, creation and using databases of economic activities of payers

In the view of elites, this policy has no great effect on economy and increase in tax revenues and they assessed the effective range of this policy in medium. However, existing database for economic activities of payers is a theoretically important issue and it can be a great help to determine the amount of tax, but anyway elites' view and their consensus views are based on the medium effect of this policy on the economy. It is worth mentioning that systems and databases of payers has been so developed in recent years and probably in the view of elites, the current systems are at an appropriate level and requires no prioritization to be changed.

Applying tax to total revenues

From the view of elites, applying tax to all revenues has a great impact on economy and increase in tax revenues. In other countries also income tax is considered one of the important tax bases for government and in Iran only employees paid their income tax during last years, however; in recent years the other people has more respected for paying tax and in the view of elites all segments of society at anywhere they earn money must pay taxes and in their view applying tax policy on total incomes can be considered as effective policies on economy.

Analysis method of this research done by total votes of elites; therefore, its result is a result that will be less criticized by critics. In the view of elites, economic criterions have a great impact on increasing tax revenues. As well as, if the economy is in its boom time, the tax bases that government can obtain tax from it will be increased and government revenue will be increased as well.

Practical suggestions

Given to research hypothesis and suggested policies the following suggestions can be offered:

- Government can increase its tax revenues through implementation of new taxes, this can affect economic situation of the country.

- Shifting tax burden from manufacturing and investment sector to consumption sector can help government increase tax revenues and cause economic boom through increase in investment and production in country.

- Tax laws of country have enormous shortcomings, therefore; it is recommended that tax laws of countries to be reviewed and reformed so that tax evasion and tax exemptions to be reduced and tax base to be increased.

- There is a great distance between tax revenues that the government is received with that amount should be received; therefore, it is recommended that government by reforming laws and expanding tax bases to eliminate this gap.

- developing the culture of paying taxes and self-reporting in society in order to reduce the cost of tax collection and increase in government's tax revenues.

- Applying tax on all incomes of individuals in order to increase tax revenues and eliminate tax exemptions.

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