Journal of Industrial Strategic Management

Prioritization of effective factors on tax culture of Stan Kerman Tax Office with the combined method of GRA-VIKOR under fuzzy environment

Maryam Lashkarizadeh*ᵃ

a Department of Economic, West Tehran Branch, Islamic Azad University, Tehran, Iran

C H R O N I C L E	**Abstract**
	Tax culture is a collection of methods, insights, perceptions, social values and reactions and the amount of people's awareness of taxes and laws, the way they receive and cost it. The aim of this study was to identify and investigate the factors affecting the tax culture from the viewpoint of the work of taxation and the experts of Tax Administration in Kerman province. To determine the key factors affecting the tax culture by employing fuzzy Delphi approach. Then, prioritizing each of the key factors of tax culture in the organization of this study was achieved using the GRA-VIKOR hybrid method under fuzzy environment. The results indicate the high importance of three factors from eleven approved factors, respectively: 1) Justice and function of the tax affairs Organization, 2) advertising and informing the importance of paying taxes 3) transparent and simplified laws Tax on the tax culture in the society. Also, the results of sensitivity analysis indicate high validity of the proposed approach.

*:   corresponding author Email: lashkarizadehm@yahoo.com

Introduction

Since taxation is one of the most important sources of revenue for governments, it can also be a reliable support for achieving economic, social, cultural and sometimes political goals. In recent years, all countries have tried to pay more in taxes to cover their current expenses. Surveys on tax revenues show that there is a significant gap between potential and actual tax capacity, which can be increased by taking measures to reform the tax system and solve existing problems and reduce the gap between tax capacity and Improved the reliance of government revenues on taxes (Arab Mazaru et al., 2011). Studies show that inefficiency and the existence of inadequacies in the country's tax system are manifested in each of the stages of data collection, diagnosis and collection. These shortcomings can be classified into three groups: cultural problems, tax laws and enforcement, and without solving such problems, it is not possible to increase the share of tax revenues from government revenues. The issue of tax culture is one of the most important concerns facing the system. Tax culture includes all public beliefs, thoughts, views and attitudes about taxes that shape the tax behavior of individuals. Changing the tax culture takes time and the country's tax system needs to cultivate and institutionalize values and Plan for appropriate tax beliefs. Since the creation and dissemination of tax culture is one of the relatively new ways of tax collection, so popularizing taxes should be one of the most basic necessities of the tax system, which alone will not be effective. The existence of tax laws that are comprehensive and have specific financial, economic and social goals and have a high capability is required in this regard. In this regard, according to paragraphs 50 and 51 of the 20-year vision document of the Islamic Republic of Iran and Article 3 of the Development Plan Law on the provision of public revenues through taxes, the importance of tax culture should be considered by economists and managers (Lashkarizadeh, 1390). Efforts to create a progressive and strong tax culture in the country can have a significant impact on reducing costs, increasing government revenues and establishing effective controls that result in increased social justice and public welfare. By creating a coherent tax system, the government's reliance on oil revenues is reduced and a large part of current and development expenditures are provided, which in this regard, strengthening the tax culture seems necessary. Therefore, the factors affecting the tax culture and promotion are necessary. It has been identified so that appropriate action can be taken in this regard. To this end, this study seeks to answer the question of what are the factors affecting the tax culture and what is the importance of each of these factors? It should be noted that the present study aims to investigate the effect of tax culture indicators in the Kerman General Tax Office by combining GRA-VIKOR methods under a fuzzy environment. According to previous studies, the use of fuzzy multi-criteria decision-making techniques to assess the tax culture in Iranian organizations has not been done and innovation has been done in terms of the combination of the mentioned methods. The research method is the fourth part of data analysis and at the end the results and suggestions are given.

2. Literature Review

- The concept of tax culture

In simple terms, tax culture can be considered as a set of attitudes and reactions of individuals towards the tax system. This attitude with an appropriate law and the performance of tax officials in

the application of the law in referring taxpayers has a key role. It is certain that the tax culture is largely influenced by the general culture of a society and how the people of a society relate to the ideological, political and economic factors of that society. Therefore, the level of knowledge, culture and ideals, political and social values and laws are important factors that affect the tax culture of society (Birger, 2001). Alam believes that tax culture reflects the quality and extent of development of tax factors, such as The tax system and the executive are taxpayers and tax laws and regulations. The tax culture also measures the government's neutrality in business and the efficiency of the tax environment, which in turn influences the decisions of foreign investors. This indicator is also important for creditor countries and international financial institutions because they can Determine the potential and ability to collect taxes and thus pay or not pay the debt of the debtor country (Alm et al., 2001). Citizens' attitudes and behaviors are deeply aligned with tax laws and regulations, indicating the growth of a country's tax culture. (Franklin et al., 1997). From the point of view of economists, the concept of tax culture is not the same for all schools. Economists who have studied tax culture can be divided into three groups: 1- Classical economists 2- Transition economists 3- Modern economists. In the following, each group's opinion on tax culture is examined.

Schumpeter was one of the first classical economists to use the term tax culture in his famous article, "Income Taxes from the Perspective of Economics and Social Sciences." They are used for a degree of development and modernity of the tax system. Their definition of tax culture refers to the efficiency of economists and tax experts in the optimal formulation of tax laws and the functioning of the tax system.

(Schumpeter, 1929). They did not pay attention to the role of taxpayers, focusing on taxpayers in defining tax culture. Mikhail Comedos is one of the famous economists who has studied countries in transition. He limits the concept of tax culture exclusively to taxpayers. Ignores the other side, namely tax politicians and economists (Camedos, 1997). Vito Tanzi, another economist in transition, believes that understanding a country's tax culture requires informing taxpayers of information and tax laws, and that taxpayers need to pay special attention to improving tax culture in transition countries. Increasing a sense of responsibility and honesty Taxpayers are the most important indicator for assessing a country's tax culture (Tanzi, 200). Rerman Berger (1998) believes that governments can collect as much tax as they want when citizens are willing to pay whatever tax they want Over time, this willingness to pay more can be estimated as a factor in promoting a tax culture that takes time to develop and improve. In defining the tax culture, modern economists consider taxpayers, legislators and the tax administration. They believe that the tax culture in any country is based on the historical, geographical, political and social characteristics of that country. Political and social have a significant impact on the tax culture of any country. The social impact of tax culture has an impact on the behavior of taxpayers and the political factor on the tax system and tax laws and regulations (Breiger-Berrow, 2000).

Factors affecting tax culture

To define the concept of tax culture by modern economists, three important and influential elements of tax culture can be distinguished as follows:

A- Status of laws and tax system of the country

Tax systems in most developing countries have many problems that can be an obstacle to the development of tax culture in these countries, including unwillingness to collect taxes from the rich motivated by increased investment by them, high tax evasion, inflexibility. Necessary adaptability of the tax system to economic conditions and low tax bases due to tax exemption from dividend income and banks, religious and non-profit organizations and import companies. Also, the low ratio of tax revenue to GDP due to Non-payment of taxes by the agricultural sector, small and low-income economic units and low share of import taxes (Alm et al., 2001).

Finally, it can be said that the complex tax system, many exemptions, excessive and complex tax laws and regulations, many changes in the tax system, lack of transparency in the tax system with corruption and bribery, have negative effects on taxpayers. As a result, improving the status of laws and the functioning of the tax system can play an effective role in promoting tax culture.

B- The role of the tax affairs organization

Experience has shown that the effectiveness of the tax administration depends on the level of political and financial decentralization as well as the level of corruption in each country. Tax collection is difficult under political decentralization but easy under financial decentralization. Because in this case, governments have a stronger incentive to support and collect effective taxes, lack of financial centralization reduces the incentive of governments to help businesses to avoid and avoid paying taxes (Arab Mazar, 2001). Recent tax developments have emphasized the issue of financial decentralization in tax collection, of which the category of local and provincial taxes is an example. It can be said that in the executive field in a tax system, the issue of justice in implementation and especially creating more incentive to pay taxes has a special place. In general, people are reluctant to pay taxes because they believe that paying taxes reduces their income and purchasing power and reduces consumption and services. In such a situation, if people are confident that the government will provide other goods and services that are added to their consumer basket by earning tax revenues, the tax burden for them will be reduced and even this can lead to voluntary payment of taxes by individuals. Be. In a local and provincial tax system in which the provincial tax administration receives most of the tax revenue of the province and spends it in the province, this tax organization can have a significant impact on increasing justice and transparency of the provincial budget from the tax office. Pay taxes and reduce tax evasion. Therefore, the role of the tax administration in promoting tax culture is very important (Alm, 2001).

C- The role of taxpayers and the extent of their participation and cooperation with the tax organization

Due to the level of tax evasion and tax avoidance, the impact of this factor on tax culture varies in different countries. Of course, participation and willingness to pay taxes can be increased by increasing trust between taxpayers and the tax administration. Self-declaration scheme is one of the ways to increase trust between taxpayers and the tax administration. It is certain that the creation of this mutual trust will not only lead to an increase in tax revenue, but will also lead to the timely collection of taxes. Until people have confidence in the country's tax system, one cannot expect proper tax returns and timely payment of taxes. Sense of

responsibility and honesty of taxpayers in promoting tax culture, especially in developing countries such as Iran where a small number of taxpayers They willingly submit their tax returns to the tax office, and at the same time, the vast majority of them are not accepted or they are very incomplete and irrational, it will have a great impact (Birgner, 2003).

In tax culture studies today, there are other divisions of factors affecting tax culture. In many studies

Factors influencing the creation of tax culture are divided into two categories within the organization and outside the organization. Effective factors within the organization to create and develop tax culture are: Attitudes of senior tax managers towards tax culture; Terms and Conditions; Tax rates and coefficients; Manpower training; Mechanize affairs; Consulting units; Designing and launching a comprehensive tax information system in the country; Advertising and information; Introducing sample taxpayers; Motivate and satisfy employees.

External factors influencing the creation and development of tax culture also include: education; Family; Media and mass media; Religious centers; Unions and trade unions; Government agencies and institutions.

- background research

Ehteshami et al. (2016) in a study examining the promotion of tax culture and its impact on the tax system according to the collection of information through a questionnaire and testing the hypothesis using Chi-square and Friedman concluded that the promotion of culture Taxes are below average among the people, and people's ignorance of the importance of paying taxes is one of the important factors in not promoting a tax culture.

Hamrahi et al. (2015) in a study examined the factors affecting the increase of tax culture among taxpayers in the real estate of Kohgiluyeh and Boyer-Ahmad Province. Findings obtained from this study show that socialization factors such as union partners, commitment to religion, media, the existence of a tax tradition in the family, the spirit of legalism in the family, are effective in increasing the tax culture. The influence of external factors such as trade unions, having a legal lawyer, encouragement and appreciation of prudent taxpayers in increasing the tax culture was also confirmed. Also, the influence of internal factors such as mechanized tax affairs, comprehensive tax information system, information Taxation, the transparency of tax laws, was confirmed in increasing the tax culture. Individual factors such as taxpayers' level of education, motivation for social participation, taxpayers' familiarity with tax laws, taxpayers' positive attitude towards tax function, political trust in the government, are effective in increasing the tax culture.

-Christian and Land (2015) in examining the factors affecting tax culture from the perspective of taxpayers and tax experts of the General Directorate of VAT in Tehran, showed that one of the obstacles to the realization of income tax is tax culture. Taxation, executive guarantee, protection of brokers, respect for the client are the most important factors influencing the tax culture.

Salehi et al. (2014) in a study examined the factors of tax culture on tax compliance among taxpayers in 11 provinces of the country. Data were analyzed using one-factor t-test and exploratory factor analysis. Among the factors and characteristics of tax culture, justice and the functioning of the organization with an average of 3.59 has

the greatest impact on tax compliance, honesty and sense of responsibility of taxpayers with an average of 3.17 in the second place and willingness to pay taxes with an average of 14 / 3 in the third place and had the least impact compared to the other two variables on tax compliance.

Regarding foreign studies, the most important factors influencing the tax culture are related to Bergerner studies for Russia and Germany. The results obtained regarding the identification of factors affecting the tax culture in these countries are as follows:

A. Germany (2002): The results of studies by Bergerner et al. Indicate the following factors as the most important factors affecting the tax culture in Germany. Sensitivity to society, the efficiency of the tax system, tax justice, awareness of the benefits of paying taxes, Trust in tax officials and experts, fear of tax employees and paying bribes to them, the existence of heavy taxes and the type of tax payment, the principle of ability to pay taxes, high resistance to paying taxes, widespread tax evasion, no prosecution of tax evasion, lack of public information Among the tax laws and the constant change of tax laws, the sense of responsibility and honesty of taxpayers, the existence of efficient specialists and experienced consultants and the certainty of tax revenues.

B. Russia (2002): Lack of interest and willingness to pay taxes, historical background of taxes, importance of taxes in income distribution, development of tax culture at different ages, identifying ways to spend tax revenues, empowering tax experts, tax evasion, feeling of victory and pride when evading taxes, having competence and sense of responsibility in taxpayers, justice of the tax administration, clarifying tax laws and encouraging exemplary taxpayers.

- James et al. (2019) by examining the tax culture in the United States and Italy showed that cultural and structural variables directly affect the amount of tax paid and factors such as tax laws, taxpayers' sense of responsibility in timely payment of taxes, trust in the political system The transparency and simplicity of tax laws and the mechanization of the tax system as well as personal and social norms affect the willingness to pay taxes.

3. Research Methods

This research is applied in terms of type of purpose and descriptive survey in terms of data collection. In this research, a questionnaire has been designed to identify the effective components of tax culture in the General Department of Economic Affairs and Finance of Kerman. A series of criteria to make the optimal decision in three-dimensional space, so the hypothesis and subsequent hypothetical test is not discussed in this study; The aim is to provide a method to "achieve a comprehensive approach to assess tax culture using multi-criteria decision-making techniques under a fuzzy environment." In this study, by studying and reviewing related research and also face-to-face interviews with experts of the organization to identify cultural factors Tax as well as related indicators. Then, using the fuzzy Delphi approach, the most key factors of tax culture are concluded. In the third part, the key factors of tax culture are studied and prioritized under the fuzzy environment using the combined GRA-VIKOR method. Sampling method In this research, the judgmental sampling design is non-probabilistic and purposeful. The statistical population of this research includes experts and experts of Kerman General Administration. Due to the limited size of the statistical population, the whole statistical population is considered as a statistical sample. The data collection tool

is a questionnaire. In general, three types of questionnaires have been used in this research. The first questionnaire in the form of fuzzy Delphi was used to refine the factors of tax culture, the second questionnaire was used to determine the weight of tax culture indicators and the third questionnaire was used to evaluate the performance and prioritization of tax culture factors. Validity and reliability of the questionnaire Since the questionnaires used in this study in the fuzzy Delphi section, based on the factors identified in the research background and its refinement by research experts, also in the fuzzy GRA-VIKOR model questionnaire, considering that this questionnaire is based

concepts of combining VIKOR and GRA techniques to solve MCDM fuzzy problems. The general steps of this method are (Koo and Liang, 2011; Li and Zhao, 2016):

Step 1. Obtain the paired matrix of each option relative to the criteria: It is assumed that a decision problem consists of m potential options and n criteria. In this case, the average degree of options for each criterion is calculated as Equation (1).

$$\tilde{x}_{ij} = \frac{1}{k}\left[\tilde{x}_{ij}^1 + \tilde{x}_{ij}^2 + \cdots + \tilde{x}_{ij}^k\right] = \frac{1}{k}\sum_{k=1}^{K} \tilde{x}_{ij}^k$$

It should be noted that the fuzzy spectrum

$$\widetilde{D} = \left[\tilde{x}_{11}\ \tilde{x}_{12}\ \cdots\ \tilde{x}_{1n}\ \tilde{x}_{21}\ \tilde{x}_{22}\ \cdots\ \tilde{x}_{2n}\ \vdots\ \vdots\ \vdots\ \vdots\ \tilde{x}_{m1}\ \tilde{x}_{m2}\ \cdots\ \tilde{x}_{mn}\ \right] = \left[\tilde{x}_{ij}\right]_{m\times n} \tag{2}$$

The structure of the proposed approach is designed and not actually made by the researcher, so the initial validity of the questionnaires is confirmed. To confirm the content validity, the questionnaire was sent to a number of (20) experts from the Kerman General Directorate of Economic Affairs and Finance and the quantity and quality of questions It was reviewed and approved by experts. In confirmation of the apparent validity, a questionnaire was sent to 5 experts who were part of the statistical sample and they confirmed that the questionnaire measures what it should. Since the collected information is finally analyzed fuzzy, high reliability Enjoys.

- *Method of data analysis*

In the present study, the GRA-VIKOR hybrid approach under fuzzy environment has been used to analyze the data. The Fuzzy GRA-VIKOR hybrid approach presents a new multi-criteria fuzzy decision-making technique to deal with complex decision-making processes in conditions of ambiguity and uncertainty in information. This approach is based on the

used to convert the verbal scale to fuzzy numbers is presented in Table (1).

TABLE 1. FUZZY RATING RANGE FOR GRA-VIKOR METHOD

Triangular fuzzy scale	Verbal scale	Fuzzy number
(8,9,10)	Full importance	$\tilde{9}$
(7,8,9)	Absolute importance	$\tilde{8}$
(6,7,8)	Very good importance	$\tilde{7}$
(5,6,7)	Relatively good importance	$\tilde{6}$
(4,5,6)	Good importance	$\tilde{5}$
(3,4,5)	Important preferably	$\tilde{4}$
(2,3,4)	Poor importance	$\tilde{3}$
(1,2,3)	Very low importance	$\tilde{2}$
(1,1,1)	Equal importance	$\tilde{1}$

So that $\tilde{x}_{ij}^k$ the fuzzy degree assigned by k is the decision maker. In this case, an MCDM problem for group decision making in a fuzzy environment is considered as follows:

So that $\tilde{x}_{ij}$، $\forall i,j$ is the fuzzy degree (fuzzy performance value) of the potential option $A_i, i = 1.2 \ldots. m$.m relative to the

$\tilde{R} = [\tilde{r}_{ij}]_{m \times n}$	
$\tilde{r}_{ij} = \left(\dfrac{l_{ij}}{u_j^+}, \dfrac{m_{ij}}{u_j^+}, \dfrac{u_{ij}}{u_j^+}\right), \qquad j \in B$	
$\tilde{r}_{ij} = \left(\dfrac{l_j^-}{u_{ij}}, \dfrac{l_j^-}{m_{ij}}, \dfrac{l_j^-}{l_{ij}}\right), \qquad j \in C$	
$u_j^+ = u_{ij} \ \ if \ j \in B$	
$l_j^- = l_{ij} \ \ if \ j \in C$	(3)

criterion $C_j, j = 1,2 \ldots,, n$.

In order to ensure consistency between evaluation criteria, the initial fuzzy decision matrix must be converted to a comparable scale. Hence the normalized fuzzy decision matrix is represented as R ((Chen, 2000):

So B is a set of profit criteria, and C is a set of cost criteria.

Step 2. Calculate the reference series of positive and negative ideal solution: After calculating the normalized values of different criteria, the two reference series of positive ideal solution A^+ and negative ideal solution A^- are defined as Equations (4) and (5).

$$A^+ = [\tilde{r}_{01}^+, \tilde{r}_{02}^+, \ldots, \tilde{r}_{0n}^+] \qquad (4)$$
$$A^- = [\tilde{r}_{01}^-, \tilde{r}_{02}^-, \ldots, \tilde{r}_{0n}^-] \qquad (5)$$

So that: $\tilde{r}_{0j}^+ = (\tilde{r}_{ij})$ ، $\tilde{r}_{0j}^- = (\tilde{r}_{ij})$,

$j = 1.2 \ldots. n$.

Step 3. Calculate the Fuzzy Gray Relationship Coefficient: The ideal solutions are positive and negative as

reference series and each of the options as comparative series. The coefficient of fuzzy gray relation of each option to the ideal positive and negative solutions is calculated based on Equations (6) and (7).

$$\gamma(\tilde{r}_{0j}^+, \tilde{r}_{ij}) = \frac{\tilde{d}_{ij}^+ + \xi \tilde{d}_{ij}^+}{\tilde{d}_{ij}^+ + \xi \tilde{d}_{ij}^+} = \frac{d(\tilde{r}_{0j}^+, \tilde{r}_{ij}) + \xi d(\tilde{r}_{0j}^+, \tilde{r}_{ij})}{d(\tilde{r}_{0j}^+, \tilde{r}_{ij}) + \xi d(\tilde{r}_{0j}^+, \tilde{r}_{ij})} \qquad (6)$$

$$\gamma(\tilde{r}_{0j}^-, \tilde{r}_{ij}) = \frac{\tilde{d}_{ij}^- + \xi \tilde{d}_{ij}^-}{\tilde{d}_{ij}^- + \xi \tilde{d}_{ij}^-} = \frac{d(\tilde{r}_{ij}, \tilde{r}_{0j}^-) + \xi d(\tilde{r}_{ij}, \tilde{r}_{0j}^-)}{d(\tilde{r}_{ij}, \tilde{r}_{0j}^-) + \xi d(\tilde{r}_{ij}, \tilde{r}_{0j}^-)} \qquad (7)$$

So that $\xi \in [0,1]$ is the elimination coefficient.

Step 4. Calculating the values of S_i and R_i
The values of S_i and R_i for

$i = 1,2, \ldots, m$ are calculated based on Equations (8) and (9).

$$S_i = \sum_{j=1}^n w_j \gamma(\tilde{r}_{0j}^+, \tilde{r}_{ij}) \qquad (8)$$

$$R_i = w_j \gamma(\tilde{r}_{0j}^-, \tilde{r}_{ij}) \qquad (9)$$

S_i represents the distance of option i from the positive ideal solution and R_i represents the distance of option i from the negative ideal solution, and w_j represents the weights of the criteria obtained through BWM analysis.

Step 5. Calculate the value of Q_i The value of Q_i for $i = 1,2, \ldots, m$ is calculated based on Equation (10):

$$Q_i = v\left(\frac{S^* - S_i}{S^* - S^-}\right) + (1 - v)\left(\frac{R_i - R^*}{R^- - R^*}\right) \qquad (10)$$

So that $S^* = S_i$, $S^- = S_i$ ،$R^* = R_i$ ، $R^- = R_i$ and the parameter v are also introduced as a weight for the maximum group utility strategy, while $(1 - v)$ weight It is an individual regret.

Step 6: Ranking Options Based on Q_i Values: Based on this, the options are ranked according to Q_i values and the following two conditions are met at the same time:

First condition (acceptance feature): Option A^1 is selected if

$Q(A^2) - Q(A^1) \geq 1/m - 1$ so that A^2 is the option that is in the second rank and m is equal to Is the total number of options.

Second condition (consistency of acceptance in decision making): Option A^1 must also be ranked first based on the values of S_i and / or R_i.

4. data analysis

- Crediting key factors in tax culture

At this stage, first, through reviewing and reviewing previous research, the key effective factors of tax culture were identified, then, in order to screen these factors, the fuzzy Delphi method has been used. A questionnaire was designed and provided to an expert committee in the option with the lowest value in Q_i is ranked first. The options are ranked based on the minimum values obtained Q_i so that the

General Department of Economic Affairs and Finance of Kerman and they were asked to determine the most effective factors. In fact, this stage consists of three main parts:

First, a list of 11 key factors influencing tax culture as well as an FDM interview table is compiled. The second part includes interviews with 40 experts, managers and experts of the General Department of Economic Affairs and Finance of Kerman. The Delphi method is mainly a reflection of group opinions through the presentation of a questionnaire. This method is a combination of traditional Delphi method and fuzzy theory, which not only maintains the advantage of Delphi method but also reduces the time of submitting questionnaires. In the third part, the opinions of experts in FDM questionnaires are converted into triangular fuzzy numbers and then the diffused values are calculated. The validation results of the fuzzy Delphi method are presented in Table (2).

identification code	result	Score				Key factors in tax culture	Row
		De-fuzzy	Average	Max	Min		
R_1	Confirmation	6.511	7.532	10	2	Transparency and simplification of rules	1
R_2	Confirmation	7.377	8.132	10	4	Research and development (r & d) in the field of tax system failure	2
R_3	Confirmation	6.922	7.765	10	3	Honoring the client and increasing the taxpayers' sense of responsibility	3
R_4	Confirmation	7.641	8.924	10	1	Motivate and satisfy employees	4
R_5	Confirmation	6.151	7.454	10	1	Advertising and information	5
R_6	Confirmation	7.563	7.532	10	4	Update on	6
R_7	Confirmation	7.650	8.132	10	4	Importance of payment	7
R_8	Confirmation	6.874	7.765	10	3	Taxation	8
R_9	Confirmation	6.104	8.924	10	4		9
R_{10}	Confirmation	6.753	7.454	10	2	Development of human capital of the tax system (tax knowledge)	10
R_{11}	Confirmation	7.451	8.688	10	4	Intelligence of the tax system	11

Table 2. Validation results of fuzzy Delphi method to identify key factors of tax culture

* Reference: Researcher findings

Equation (2) has been used to diffuse the factors. Also in this research, the limit of acceptability of the factors is equal to 6. If the diffused value of a triangular fuzzy number is close to 6 or higher according to experts, it is accepted as an acceptable factor and otherwise will not be accepted; According to the results obtained from Table (2), all factors are considered as the final factors of the tax culture of the General Directorate of Economic Affairs and Finance of Kerman.

Prioritization of tax culture factors

In this section, by converting verbal variables into quantitative values and using the combined fuzzy GRA-VIKOR technique, the performance characteristic of each tax culture factor can be measured. For this purpose, by distributing and collecting questionnaire number (3) and implementing step by step the proposed method of ranking 11 factors of tax culture are identified. To do this, we must first calculate the values of S_i, R_i and the characteristic Q_i. In this section S_i the values related to the distance of option i from the positive ideal solution and R_i represent the distance of option i from the negative ideal solution and also the characteristic Q_i related to each option (tax culture factors) using equations (8) to (10) Are calculated. It should be noted that the parameter v, which is introduced as a weight for the maximum group utility strategy, is considered equal to 0.5. Then the options are ranked based on the values S_i, R_i and the characteristic Q_i. Based on this, the options are ranked according to the values of S_i, R_i and Q_i attributes, and the option with the lowest values in S_i, R_i and Q_i attributes is ranked first. According to the obtained result, the tax culture factor "Function and Justice of the Tax Affairs Organization" (option number 11) is in the first rank and is unique in this rank because it has the lowest value of Q (0.000) and on the other hand, a pair of method conditions The fuzzy combination ensures GRA-VIKOR $)Q(R_5) - Q(R_{11}) \geq 1/10$ and also R_{11} is in the first place according to the value of R as shown in Table (3).

Table 3 : Sorting options by values S، R و Q

Factors of tax culture	S	Ranking	R	Ranking	Q	Ranking
R_1	0.542	8	0.193	3	0.380	3
R_2	0.464	2	0.405	11	0.980	11
R_3	0.559	9	0.224	4	0.406	4
R_4	0.455	1	0.323	6	0.833	10
R_5	0.577	10	0.183	2	0.285	2
R_6	0.500	4	0.271	8	0.630	9
R_7	0.57	5	0.273	9	0.599	8
R_8	0.480	3	0.231	10	0.592	7
R_9	0.537	7	0.258	7	0.523	6
R_{10}	0.519	6	0.225	5	0.497	5
R_{11}	0.686	11	0.159	1	0.000	1
$S^- = 0.455$			$R^- = 0.405$			
$S^* = 0.686$			$R^* = 0.164$			

- *sensitivity analysis*

Since the prioritization of options (tax culture factors) was done through the GRA-VIKOR hybrid method under fuzzy

environment, it can be interesting to understand how much results are obtained against steady changes. Sensitivity is called. As mentioned in the expression of the GRA-VIKOR fuzzy hybrid method, the parameter ξ (resolution coefficient) and the parameter v (maximum group utility strategy weight) are considered equal to 0.5. In this study, in order to show stability in the results obtained from the proposed method, the simultaneous effect of changing different values of ξ and v on the results was investigated. The results showed that in different values of v (v = 0.1, v = 0.3 and, v = 0.7 v = 0.9) and ξ (ξ = 0.2, ξ = 0.5, ξ = 0.8) Since the condition $Q(R_5) - Q(R_{11}) \geq 1/10$ is guaranteed, so the option R_{11} is in the first place in all cases. . In general, with increasing the value of parameter v, the values related to the Q characteristic of the options also

increase relatively, and only in some cases the rank of the options has changed, which

can be ignored. The results obtained from the sensitivity analysis confirm that the tax culture factor "Justice and Functioning of the Tax Administration" Option No. 11) has the lowest value of Q (0.000) and has the best performance in promoting our culture, which is always ranked First it is placed in all different values of ξ and v.

Conclusion and suggestion

In this study, by studying and reviewing related researches as well as face-to-face interviews with the experts of the studied organization, 11 factors of tax culture in Kerman Economic and Financial Affairs Organization were identified. Then, using the fuzzy Delphi approach, the key factors of tax culture were validated. Then, using the combined GRA-VIKOR approach under the fuzzy environment, the key factors of tax culture were prioritized, which is shown in Table (4).

Table 4- Final prioritization of tax culture factors

Rank	Q	Identified tax culture factors	ROW
1	0.000	Justice and the functioning of the tax administration	1
2	0.285	Advertising and informing about the importance of paying taxes	2
3	0.380	Transparency and simplification of tax laws	3
4	0.406	Honoring the client and increasing the taxpayers' sense of responsibility	4
5	0.497	Introducing sample taxpayers	5
6	0.523	Increase taxpayers' trust in tax officials	6
7	0.592	Optimal implementation of the comprehensive tax system of the province	7
8	0.599	Development of human capital of the tax system (tax knowledge)	8
9	0.630	Intelligence of the tax system	9
10	0.833	Motivate and satisfy the employees of the tax organization	10
11	0.980	Research and development (R&D) in the field of tax system failures	11

5. Conclusion and suggestion

In this study, by studying and reviewing related researches as well as face-to-face interviews with the experts of the studied organization, 11 factors of tax culture in Kerman Economic and Financial Affairs Organization were identified. Then, using the fuzzy Delphi approach, the key factors of tax culture were validated. Then, using the combined GRA-VIKOR approach under the fuzzy environment, the key factors of tax culture were prioritized, which is shown in Table (4).

According to the obtained result, the factor of "justice and functioning of the tax affairs organization" was in the first rank, and then the factor of propaganda and information about the importance of paying taxes and "transparency and simplification of tax laws" were in the second and third ranks. According to the results, it can be said that by increasing the function and justice in the tax organization by specifying the way of spending taxes in the society, increasing the taxpayers' trust in tax officials, reducing tax discrimination and paying taxes The tax system in order to change the country's tax system and track production from the time of import of raw materials to its conversion into consumable goods and control of its distribution process in order to demand real taxes that must be carefully considered in the allocation of economic code and accurate information Taxation has created a context in which the self-declaration system has replaced the top-down system, and everyone is acknowledging that if they want to provide incorrect information, the tax authorities have the ability to evaluate and punish it. Therefore, the function of the tax organization and the administration of justice in determining and collecting taxes is important. Because increasing the function of the tax organization is the most important factor in promoting tax culture. The tax organization should also through mass media, holding the National Festival

of Tax Culture, textbooks benefits Explain the payment of taxes as a general task and in the form of how taxes affect social life, the development of the country, the redistribution of wealth and the allocation of resources in a language that is understandable to the general public. Since the simplification of tax laws also has a significant impact on promoting the tax culture, so the ambiguities that exist in the tax law should be eliminated and some exemptions should be removed and the content of some laws should be revised. Moving towards the development of the tax system and the optimal implementation of the comprehensive tax plan; having a strong, integrated and mechanized system in the tax system and promoting systemic thinking is better with the aim of achieving tax compliance of taxpayers and facilitating tax planning. The most important issues that are directly related to the tax culture are the importance of paying taxes and developing the tax economy among the people. If the government adheres to and institutionalizes people-centered principles in its tax behavior, then people's awareness of tax programs and costs and revenues will increase, and people will indirectly monitor tax expenditures, resulting in increased public confidence, legitimacy. And the tax will be acceptable. Well-informed taxpayers can be introduced and materially and spiritually encouraged.

references:

1. Ehteshami, Sadegh and Faezeh Abdi, 2016, "Identifying the factors promoting tax culture and its impact on the tax system", 5th International Conference on New Research, Singapore, December 16, https://www.civilica.com/Paper-ACCFIN04-ACCFIN04_073.html.

2. Salehi, Mehdi; Parvizifard, Saeed and Ostovar, Mastooreh (2014) "Factors of tax culture on tax compliance among taxpayers" Journal of Tax Research (Series 71), Fall 2014 No. 23.

3. Askari, Ali; Tutunchi, Amin and Davood Motalebi (1390) ور و تابستان ، 1390.

4. Arab Mazar, Ali Akbar; Maryam Golmohammadi and Behrouz Bagheri 0 (2011) "Index of achieving a desirable and efficient tax system", Tax Research Journal, New Volume, Year 19, Number 12, pp. 70-27.

5. Maryam Lashkarizadeh and Mohammad Azizi. "Identifying some factors affecting the promotion of tax culture in Iran." Researcher (Management) 8, 22 (1390): 82-91.

6. Masihi, Mohammad, Mohammad Nejad Aali Zamini, Abolghasem (2015). 1394, pp. 29-45.

7. Hamrahi, Mehrdad and Yousef Kohan Mansourkhani, 2015, A Study of the Factors Affecting the Increase of Tax Culture among Taxpayers in Kohgiluyeh and Boyer-Ahmad Province (Real Estate Company), 4th National Conference on Management and Accounting, Tehran, Narkish Information Institute, https:/www.civilica.com/Paper-ACCFIN04-ACCFIN04_073.html

8. Alm, James and Martinez-Vazquez, Jorge Institutions, Paradigms, and Tax Evasion in Developing and Transition countries. 2001, Andrew Young School of Policy Studies, Georgia State University.

9. BaykasoğLu, A., KaplanoğLu, V., DurmuşOğLu, Z. D., & hinAhin, C. (2013). Integrating fuzzy DEMATEL and fuzzy hierarchical TOPSIS methods for truck selection. Expert Systems with Applications, 40 (3), 899-907.

10. Brinkmann, Richard L. / Brinkmann, June E., Cultural lag: conception and theory. International Journal of Social Economics, 1997, 24, 609 - 627.

11. Birger, Nerre; "The Concept of Tax Culture". University of Hamburg. Germany (2001) INTERNET: http: // www. pitt. edu / ~ dmberk / pdube4.

12. Birger, Nerré (2002d): "The Role of Tax Culture in Transformation Processes" - The Case of Russia. ASPE Working Paper # 03/2001 St. Petersburg, Russia. INTERNET: http: // www. aspe. spb. ru / WP103Abstract. htm.

13. Camdessus, Michel: Address by Michel Camdessus, Managing Director of the International Monetary Fund, at the Moscow Institute of International Affaires, Moscow,: http://www.imf.org/external/np/speeches/1997/ mds9705. htm.

14. Chen, C. T. (2000). Extensions of the TOPSIS for group decision-making under fuzzy environment. Fuzzy sets and systems, 114 (1), 1-9.

15. Franklin, Jennifer L. Tax Avoidance by Citizens of the Russian Federation: Will theDraft Tax Code Provide a Solution? Duke Journal of Comparative & Internationalhttp:

JISM

IAUFB.AC.IR

//www.law.duke.edu/journals/djcil/ articles / djcil8p135htm.

16. JamesAlma, BennoTorgle (2019). "Culture differences and moral tax in the United States and in Europe", Journal of Economic Psychology, Volume 27, Issue 2, April 2017, Pages 224-246.

17. Hsu, Y. L., Lee, C. H., & Kreng, V. B. (2010). The application of Fuzzy Delphi Method and Fuzzy AHP in lubricant regenerative technology selection. Expert Systems with Applications, 37 (1), 419-425.

18. Kuo, M. S., & Liang, G. S. (2011). Combining VIKOR with GRA techniques to evaluate ervice quality of airports under fuzzy environment. Expert Systems with Applications, (3), 130412.

19. Nerre, Birger. The Concept of Tax Culture. University of Hamburg. Germany, 2001. (b) Alm, James and McKee, Michael (2001): Tax Compliance as a Coordination Game. Paper presented at the National Tax Association's Ninety-Forth Annual Conference 2001. Baltimore, Maryland, USA.

20. Schumpeter, Joseph A. Economics and Sociology of Einkommensteuer. Der Deutsche Volkswirt, 1929, 4, 380 - 385. (b) Reprinted in: Joseph A. Schumpeter: Aufs? Tze zur Wirtschaftspolitik, edited by Wolfgang F. Stolper and ChristianSeidel. Tübingen: J.C.B. Mohr, 1985, 123 - 133.

21. Tanzi, Vito / Tsibouris, George, 2000, Fiscal Reform Over Ten Years of Transition. IMF Working Paper No. 00/113, Washington DC.