

Modelling tax consciousness evaluation in the context of economic development uncertainty

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ABSTRACT

The aim of this study is to compare a finite set of subjects of taxation by means of evaluating their relative importance by tax consciousness levels using a scale in T. Saaty's analytic hierarchy process. As a result, the highest value is obtained for large taxpayers, followed by the government, then controlling bodies, and the lowest value is obtained for small taxpayers. The values of the cognitive component for all subjects of taxation are high due to the high accessibility of education, lifelong learning, and development of advisory functions of controlling bodies. Middle-high values of emotional and volitional component are determined by the subjective nature of managerial decision-making and the degree of trust in government and taxation system. Low values of the behavioral component are determined by the subject's socio-economic role which affects the availability of tax behavior alternatives and their risks in a certain area of activity. It has been proved that there are no standard values for the structural elements and tax consciousness as a whole as they simultaneously represent the cause and effect of imbalances in the functioning and development of the socio-economic system of the country.

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1. Introduction

The multilevel and multipurpose system of tax management which is adopted in developed countries is aimed at reforming [7] in order to achieve administrative transparency [28], monitor compliance with law, address tax behavior consequences [32] and thus improve tax culture in general [25]. Taxation subjects' behavior is determined by the total of the decisions they make, while every of these decision is determined by various external environmental factors, such as trust in the authorities, rigidity of the taxation system, profitability, fairness of tax burden [6], [29] as well as internal factors, such as peculiarities of their current tax consciousness [26]. Differences in taxation subjects' behavior are also determined by the role (government, general public, controlling bodies, taxpayers, tax agents) [14] they perform in their socio-economic environment [33]. Based on the reflection of the perceived tax situation, individual tax consciousness forms an appropriate response, determines decision-making in terms of taxation, and therefore the type of tax behavior. Consequently, the type of tax behavior can be seen as a derivative of the tax consciousness level which is why governments and controlling bodies should focus on causes of tax behavior, determined by taxation subjects' tax consciousness, instead of its effects. Tax behavior is manifested externally, so it is subject to research, while the level and structure of tax consciousness are difficult to formalize and evaluate. At the heart of all attempts to evaluate tax consciousness there are methods of sociological, statistical research [1], [12], agent-oriented simulation [11]. However, the results of these research methods are only relevant at the time of their

publication, since they rely on the opinions of respondents whose opinion is versatile in the context of significant dynamics of socio-economic processes. An attempt to take into account the fuzziness of judgments while evaluating tax consciousness was made in a previous work [13], [15] using fuzzy logic methods (Mamdani algorithm). Since the level of tax consciousness becomes evident in the process of taxation, reflexive management methods proved effective as well [16], [17]. The available experience of applied research on tax consciousness, proving strength of certain cause-effect relationships provides basis for expert methods application including T. Saaty's [27], [30] analytic hierarchy process, which should be given special attention.

2. Material and methods

Tax consciousness is seen as a tool used to form a subjective image (both real and ideal) of taxation by means of reflecting input tax information through the prism of tax awareness, emotions and evaluations that determine specific perception of and attitude to taxation which results in revealing problems and providing guidelines on how to act in a particular tax situation [15]. From the point of view of the systems approach and the theory of psychology, tax consciousness is a finite aggregate of functional elements (cognitive, emotional and volitional, behavioral ones) with their properties, plurality of connections between them, aims and possibilities, which are studied independently and in the context of socio-economic environment at a stated period of time. Goals and opportunities are determined by taxation subjects' socio-economic role which affects the level of their tax consciousness. Thus, it is appropriate to evaluate tax consciousness and its components in the context of interaction between individual subjects of taxation when the properties of the cognitive, behavioral, emotional and volitional components become evident, which provides a platform to substantiate and compare their values. The aim of this study is to compare a finite set of subjects of taxation by means of evaluating their relative importance by tax consciousness levels using a scale in T. Saaty's analytic hierarchy process (Saaty, 1980). The method is based on the systems approach whose main elements are expert perspective of problem solving and results of cause-effect relationships analysis.

We shall consider $\frac{n(n-1)}{2}$ equations, where n is the number of criteria at one level. Using the equations results, we create a pairwise comparison matrix $A = \|a_{ij}\|_{m \times m}$. Consistency between results, i. e. $a_{ij} = w_i / w_j$, for $i, j = \overline{1, m}$ can be explained as follows $a_{ij} = 1, a_{ij} = 1/a_{ij}$ for $i, j = \overline{1, m}$, as x^i has $a > 1$ times more weight relative to x^j . If it is perfectly consistent, $A = \begin{pmatrix} w_1 \\ \dots \\ w_m \end{pmatrix} = m \begin{pmatrix} w_1 \\ \dots \\ w_m \end{pmatrix}$ as relative weight vector $(w_1, \dots, w_m)^T$ is the eigenvector of matrix A , and corresponds to the eigenvalue $A, \lambda = m$ [24]. Thus, we can calculate relative priorities $\lambda_{max} \rightarrow m, m$ - eigenvalue of matrix A , and minimum distance between λ and m means better consistency of judgments [25]. Then relative priority vector $(w_1, \dots, w_m)^T$ is built using the geometric mean formula. In particular, relative weight values for every row of matrix A are calculated as follows: $w_i = \frac{\sqrt[m]{a_{1i} \dots a_{im}}}{\sum_{i=1}^m \sqrt[m]{a_{1i} \dots a_{im}}}, i = \overline{1, m}$. With results for w_i , the eigenvalue of matrix A is calculated by determining $A \times w$ [27]. After evaluating λ_{max} the consistency index is obtained: $J_p = \frac{\lambda_{max} - m}{m - 1}$. The results are compared to the standard ones of J_e . If $J_e \leq 0,1 \times J_e$, evaluation results satisfy the research conditions [27].

Table 1 : Standard consistency values

Number of objects	3	4	5	6	7	8	9	10	11	12	13	14	15
J_e	0.58	0.9	1.12	1.24	1.32	1.41	1.45	1.49	1.51	1.54	1.56	1.57	1.59

Global priorities for the elements of a certain level are evaluated on the principle of synthesis, namely calculating the sum of the product of the local priorities for each element of a certain hierarchy level w_i^* and global priorities of the previous level elements K_i :

$$M_i = \sum_{i,j=1}^m w_i^* \times K_i. \tag{1}$$

At the second stage of the study, the factors of the second level of the hierarchy are given priorities and

arranged according to the decrease of their weight. The work [11] proves that compliance with tax regulations and attitude to taxation are interrelated and enhance each other. Improving the attitude to taxation was found [15] to raise the level of tax consciousness by 35%, increase the level of tax awareness by 34% and make tax behavior 32% more active. Thus, the factors are arranged by their weight in descending order which allows us to calculate each one's weight using the first S. Fishburn's formula. Since $E \geq K \geq P$, $m=3$, factors' weights form a descending arithmetic progression, and therefore are calculated as follows:

$$W_i = \frac{2(m-i+1)}{m(m+1)}, i = \overline{1, m}. W_E = 0,5; W_K = 0,33; W_P = 0,17. \quad (2)$$

With regard to the systemic structure of tax consciousness, its elements on every level of the hierarchy are subject to evaluation (Fig. 1).

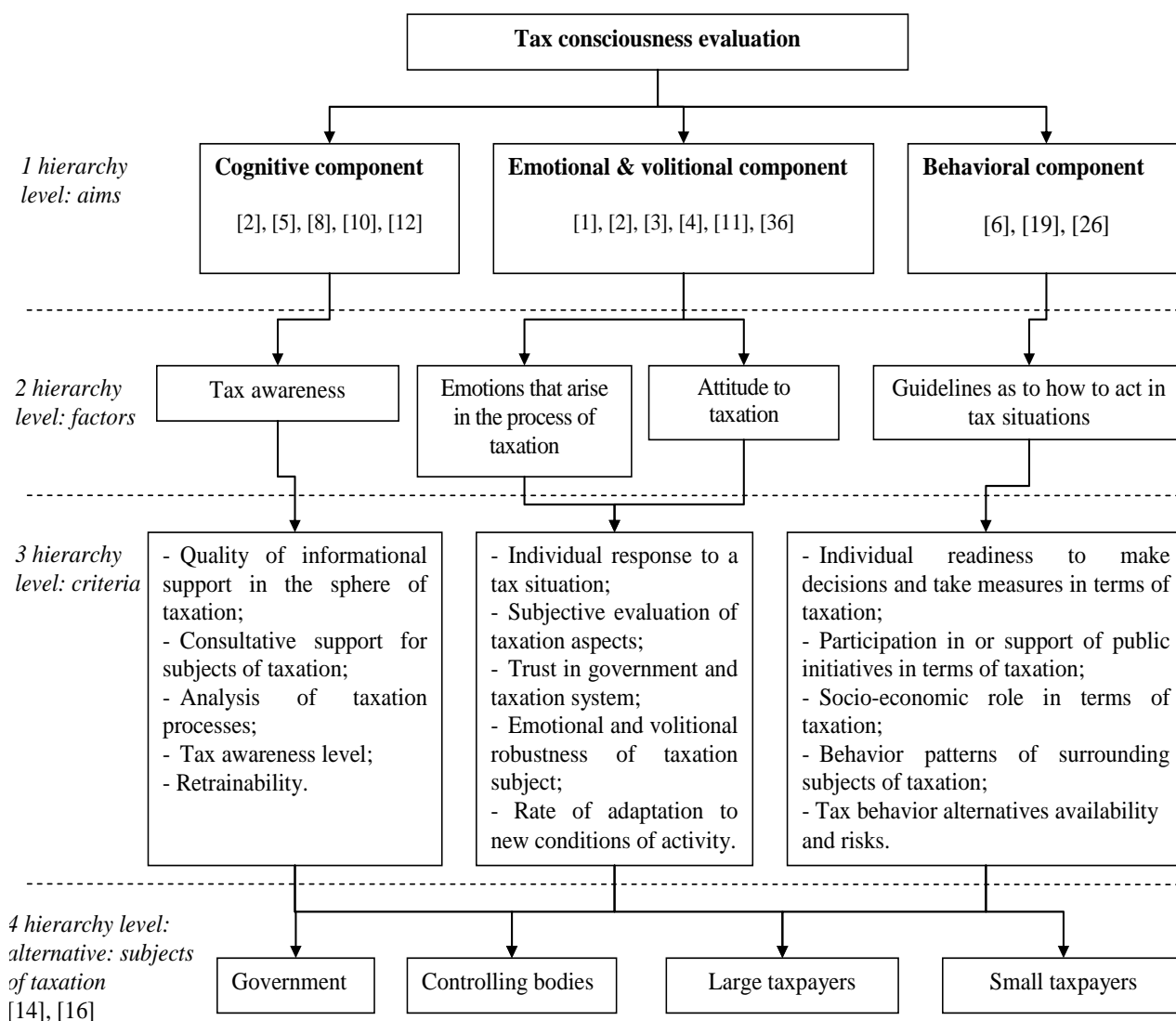


Figure 1. Hierarchical model of evaluating the level of tax consciousness of taxation subjects

The first level of the hierarchy represents the objectives of evaluating the components of tax consciousness: cognitive K , emotional-volitional E , and behavioral P ones. The second level includes factors determining the previous level components, namely: tax awareness, emotions that arise in the process of taxation, attitude to taxation, guidelines on how to act in terms of taxation. The third level of the hierarchy gives criteria for every factor which specify the purpose of the study. At the fourth level of the hierarchy, there are four alternatives (government, controlling bodies, large and small taxpayers) that are evaluated according to the criteria of the first level. At the third stage of the study, the criteria of the third level of the hierarchy are analyzed against the

second level elements. At the fourth stage, we get the global priorities for the third level elements based on the principle of synthesis. At the fifth stage we identify local priorities for the fourth level elements in relation to the third level criteria. The proposed approach to tax consciousness evaluation allows, based on identified cause and effect relationships, for a quantitative evaluation of its level and comparing the values by subjects of taxation.

3. Results

The criteria of the third level of the hierarchy are analyzed against the second level elements. For this purpose, a matrix of pair-wise comparisons was designed (Table 2).

The eigenvector of local priorities:

Priority vector, : \bar{d}_i :

$$\begin{aligned} \bar{d}_1 &= \sqrt[5]{1 \times 1 \times 2 \times 0,20 \times 0,20} = 0,60; \bar{d}_2 = \sqrt[5]{1 \times 1 \times 1 \times 0,14 \times 0,4} = 0,46; \\ \bar{d}_3 &= \sqrt[5]{0,5 \times 1 \times 1 \times 0,5 \times 0,33} = 0,61; \bar{d}_4 = \sqrt[5]{5 \times 7 \times 2 \times 1 \times 0,33} = 1,88; \\ \bar{d}_5 &= \sqrt[5]{5 \times 7 \times 3 \times 3 \times 1} = 3,16. \sum_{i=1}^n \bar{d}_i = 0,60 + 0,46 + 0,61 + 1,88 + 3,16 = 6,71. \end{aligned}$$

Table 2 : Matrix of pairwise comparisons by "Cognitive component" factor

Line numbers and names of compared elements	Numbers of compared elements					Priority vector, \bar{d}_i	Local priorities, d_i
	1	2	3	4	5		
1. Quality of informational support	1	1	2	0.20	0.20	0.60	0.09
2. Consultative support for subjects of taxation	1	1	1	0.14	0.14	0.46	0.07
3. Analysis of taxation processes	0.50	1	1	0.50	0.33	0.61	0.09
4. Tax awareness level	5	7	2	1	0.33	1.88	0.28
5. Retrainability	5	7	3	3	1	3.16	0.47
Row-vector (sum)	12.5	17	9.0	4.84	2.01	6.71	1.00
Consistency evaluation	$\lambda_{\max} = 5.406, I_C = 0.101, I_{CR} = 0.09$						

Local priorities, d_i :

$$\begin{aligned} d_1 &= \frac{0,6}{6,71} = 0,09; d_2 = \frac{0,46}{6,71} = 0,07; d_3 = \frac{0,61}{6,71} = 0,09; \\ d_4 &= \frac{1,88}{6,71} = 0,28; d_5 = \frac{3,16}{6,71} = 0,47; \sum_{i=1}^n d_i = 0,09 + 0,07 + 0,09 + 0,28 + 0,47 = 1. \end{aligned}$$

Now we can calculate the value for the consistency of judgments.

We find the maximum eigenvalue λ_{\max} for the matrix of pair-wise comparisons. We calculate the s_i row-vector for every column of the matrix of pair-wise comparisons:

$$\begin{aligned} S_1 &= \sum_{i,j=1}^5 1 + 1 + 0,5 + 5 + 5 = 12,50; S_2 = \sum_{i,j=1}^5 1 + 1 + 1 + 7 + 7 = 17; \\ S_3 &= \sum_{i,j=1}^5 2 + 1 + 1 + 2 + 3 = 9; S_4 = \sum_{i,j=1}^5 0,2 + 0,14 + 0,5 + 1 + 3 = 4,84; \\ \lambda_{\max} &= \sum_{i=1}^5 0,09 \times 12,5 + 0,07 \times 17 + 0,09 \times 9 + 0,28 \times 4,84 + 0,47 \times 2,01 = 5,406. \end{aligned}$$

Now we can find the index and the ratio of the consistency of expert judgments. The index of consistency (I_C) is calculated as follows : $J_C = \frac{5,406-5}{5-1} = 0,101$. We can compare the obtained index value to the standard one (Table 1). $I_C \leq 0,1 \times I_S$. Since the $I_C = \frac{0,101}{1,12} = 0,09$ condition is fulfilled, we can conclude that the results we have arrived at are trustworthy. The consistency ratio is 9% of the standard value. We have obtained trustworthy results since the ratio is under 10%.

We can do calculations for the "Emotional and volitional" and "Behavioral" components likewise and write the results obtained into Tables 3, 4. These results are satisfactory and trustworthy, because the consistency ratio does not exceed the critical value of 10%.

Table 3: Matrix of pairwise comparisons by "Emotional and volitional component" factor

Line numbers and names of compared elements	Numbers of compared elements					Priority vector, \bar{d}_i	Local priorities, d_i
	1	2	3	4	5		
1. Individual response to tax situation	1	1	0.20	0.20	1	0.53	0.09
2. Subjective evaluation of taxation aspects	1	1	3	1	3	1.55	0.28
3. Trust in government and taxation system	5	0.33	1	5	3	1.90	0.34
4. Emotional and volitional robustness of taxation subject	5	1	0.20	1	1	1.00	0.18
5. Rate of adaptation to new conditions of activity	1	0.33	0.33	1	1	0.64	0.11
Row-vector (sum)	13	3.67	4.73	8.20	9.00	5.63	1.00
Consistency evaluation	$\lambda_{\max} = 5.6285, I_C = 0.07, I_{CR} = 0.063$						

Table 4: Matrix of pairwise comparisons by "Behavioral component" factor

Line numbers and names of compared elements	Numbers of compared elements					Priority vector, \bar{d}_i	Local priorities, d_i
	1	2	3	4	5		
1. Individual readiness to make decisions and take measures in terms of taxation	1	3	0.20	0.20	0.20	0.47	0.07
2. Participation in or support of public initiatives in terms of taxation	0.33	1	0.20	0.20	0.20	0.31	0.05
3. Socio-economic role in terms of taxation	5	5	1	3	1	2.37	0.36
4. Behavior patterns of surrounding subjects of taxation	5	5	0.33	1	1	1.53	0.23
5. Tax behavior alternatives availability and risks	5	5	1	1	1	1.90	0.29
Row-vector (sum)	16.33	19	2.73	5.40	3.40	6.58	1.00
Consistency evaluation	$\lambda_{\max} = 5.28, I_C = 0.07, I_{CR} = 0.062$						

At the fourth stage, we get the global priorities for the third level elements based on the principle of synthesis, the calculation results are shown in Table 5.

Table 5: Global priorities for the third level elements

Cognitive component: $W_1 = 0.5$	Emotional and volitional component $W_2 = 0.33$	Behavioral component $W_2 = 0.17$
$K_1=0,5 \times 0,09=0,04$	$K_6=0,33 \times 0,09=0,03$	$K_{11}=0,17 \times 0,07=0,01$
$K_2=0,5 \times 0,07=0,03$	$K_7=0,33 \times 0,28=0,09$	$K_{11}=0,17 \times 0,07=0,01$
$K_3=0,5 \times 0,09=0,05$	$K_8=0,33 \times 0,34=0,11$	$K_{12}=0,17 \times 0,36=0,06$
$K_4=0,5 \times 0,20=0,14$	$K_9=0,33 \times 0,18=0,06$	$K_{12}=0,17 \times 0,23=0,04$
$K_5=0,5 \times 0,47=0,24$	$K_{10}=0,33 \times 0,11=0,04$	$K_{13}=0,17 \times 0,29=0,05$

Thus, based on Table 6, we can conclude that the most important criteria of the third level are retrainability, trust in the government and taxation system, socio-economic role in terms of taxation.

At the fifth stage we identify local priorities for the fourth level elements in relation to the third level criteria (see appendices: Tabular Hierarchy 7–21). Thorough analysis of the results obtained on the basis of the calculated consistency of judgments allows us to conclude that these results are satisfactory and trustworthy. For the obtained consistency indices, the $I_C \leq 0,1 \times I_S$ condition is fulfilled and the consistency ratio does not exceed the critical value of 10%. At the last, sixth stage of the study, we obtain the global priorities of the fourth level elements, Table 6. Based on the research done we can conclude that the level of tax consciousness is 0.271 for large taxpayers, 0.269 for the government, 0.240 for controlling bodies, and 0.220 for small taxpayers.

Table 6: Results of evaluating the level of tax consciousness of taxation subjects

Subject of taxation	Values			
	Tax consciousness	Cognitive component	Emotional and volitional component	Behavioral component
Government	0.269	0.132	0.097	0.040
Controlling bodies	0.240	0.135	0.075	0.030
Large taxpayers	0.271	0.173	0.059	0.039
Small taxpayers	0.220	0.060	0.099	0.060

The value of an index depends on the values of its components. It has been found that the highest influence of the cognitive component is observed for large taxpayers while the lowest is for small ones. The emotional and volitional component has been found to have significant influence for small taxpayers and less influence for large ones. The highest influence of the behavioral component on the level of tax consciousness is identified for small taxpayers while it is the lowest for controlling bodies.

The value of the cognitive component [2], [5], [10], [35] for all subjects of taxation is high due to the high accessibility of education, spread of lifelong learning ideas, development of advisory functions of controlling bodies, all of which had a general positive effect on the level of tax awareness. The emotional and volitional component is defined by trust in government and taxation system, and subjective nature of managerial decisions made. Values of the behavioral component are determined by the subject's socio-economic role which affects availability of tax behavior alternatives and their risks in a certain area of activities. The values obtained correspond to reality since it is large taxpayers who provide the bulk of tax revenues, have the required staff of tax professionals and enough capital to be initiators in the process of tax reforms, so their commercial interests take into account government bodies. Large taxpayers require special tax attention which has resulted in introducing specified offices for large taxpayers in the structure of fiscal services.

In addition to the study conducted on taxation subjects' tax consciousness, it is also defined as either a form of behavior, or emotions that arise in the process of taxation [23], [36], which, in our opinion, is one-sided. Tax consciousness is evaluated as a factor of fulfilling the tax duty conscientiously [23], or as a result of fulfilling the tax duty [15]. The paper [16], [17] substantiates the model of taxation subjects' tax consciousness on the principles of reflexive interaction and integral estimation, which results in a strategy of raising tax consciousness level. Tax consciousness evaluation tools are represented by the methods of sociological research (questionnaires) whose results are statistically estimated [10],[15], [18], [24], analyzed to identify cause and effect relationships and regularities using the correlation and regression analysis [4], [20], [22], Evolutionary Game Theory [19]. Fuzzy simulation scenarios [14] were developed and analyzed establishing paramount importance of forming positive attitude towards taxation in order to raise the level of tax consciousness. The work [1] grounds significance and positive influence of correlation between knowing tax regulations and responsible payment of tax liability. In addition, [8] point out that the aggregate of such factors as understanding taxes, awareness of tax payments, quality of revenue services, tax penalties has positive effect on conscious and conscientious compliance with tax regulations. Conscientious payment of tax liability in [6], [8] is achieved through ensuring positive attitude, high level of awareness, and solvency of taxpayers. [14] studied differences in forming tax consciousness of tax agents as compared to taxpayers in terms of their attitude to admitting tax duty. Using questionnaires, the researcher provides evidence that there is a significant difference in how subjects of taxation admit tax duty depending on the level of their tax consciousness. [14] notes that factors which stimulate the development of conscious tax payment on the part of tax agents and taxpayers include ensuring democracy and justice which can be achieved through changes in attitude to tax duty. Importance of understanding for fulfilling tax duty is justified in the study [3] where

realization, understanding and readiness are argued to be the agents of forming positive attitude to taxation. In order to raise the level of tax consciousness it is recommended to focus on the differences in tax behavior of various subjects of taxation, build up trust in government structures and individual readiness to make decisions or take actions in terms of taxation, monitor the level of tax awareness in order to prevent it from being used for tax evasion, build positive attitude to taxation, achieve fairness of tax burden and responsibility of taxation subjects.

4. Conclusions

The study focuses on modeling evaluation of taxation subjects' tax consciousness using T. Saaty's analytic hierarchy process. It offers an insight into the content of tax consciousness and its structural elements which include cognitive, emotional and volitional, behavioral components. The paper presents a hierarchy of forming evaluations of tax consciousness of the government, controlling bodies, large and small taxpayers. The tax consciousness hierarchy is based on priority of emotions and attitude to taxation. Medium taxpayers and tax agents were deliberately excluded from the study as their functions partially coincide with the ones of other subjects of taxation under study. It has been proved that the most important criteria that determine tax consciousness are retrainability, trust in the government and taxation system, socio-economic role in terms of taxation. Based on the modeling results, it has been found that the level of tax consciousness is 0.271 for large taxpayers, 0.269 for the government, 0.240 for controlling bodies, and 0.220 for small taxpayers. With all subjects of taxation, high values are obtained for the cognitive component, medium values for the emotional and volitional component, and the lowest values are obtained for the behavioral one. In general, there are no standard values provided for tax consciousness and its components as its level is determined by a wide and multi-aspect range of factors, and moreover, time, place and method applied to study these factors also influence the results. The results of the study provide grounds to substantiate an optimal mix of tax consciousness structural components to maximize its level.

5. Appendices

TABULAR HIERARCHY

Table 7 : Local priorities of the fourth level elements by "Quality of informational support" criterion

Line numbers and names of compared elements	Numbers of compared elements				Priority vector, \bar{u}_i	Local priorities, u_i
	1	2	3	4		
1. Government	1	2	5	7	2.89	0.50
2. Controlling bodies	0.50	1	5	7	2.05	0.35
3. Large taxpayers	0.20	0.20	1	3	0.59	0.10
4. Small taxpayers	0.14	0.14	0.33	1	0.29	0.05
Row-vector (sum)	1.84	3.34	11.33	18.00	5.81	1.00
Consistency evaluation	$\lambda_{\max} = 4.13, I_C = 0.043, I_{CR} = 0.047$					

Table 8 : Local priorities of the fourth level elements by "Consultative support for subjects of taxation" criterion

Line numbers and names of compared elements	Numbers of compared elements				Priority vector, \bar{u}_i	Local priorities, u_i
	1	2	3	4		
1. Government	1.00	2.00	7.00	9.00	3.35	0.57
2. Controlling bodies	0.50	1.00	3.00	5.00	1.65	0.28
3. Large taxpayers	0.14	0.33	1.00	3.00	0.61	0.10
4. Small taxpayers	0.11	0.20	0.33	1	0.29	0.05
Row-vector (sum)	1.75	3.53	11.33	18.00	5.91	1.00
Consistency evaluation	$\lambda_{\max} = 4.05, I_C = 0.018, I_{CR} = 0.019$					

Table 9 : Local priorities of the fourth level elements by "Analysis of taxation processes" criterion

Line numbers and names of compared elements	Numbers of compared elements				Priority vector, \bar{u}_i	Local priorities, u_i
	1	2	3	4		
1. Government	1.00	1.00	5.00	9.00	2.59	0.45
2. Controlling bodies	1.00	1.00	3.00	7.00	2.14	0.37
3. Large taxpayers	0.20	0.33	1.00	5.00	0.76	0.13
4. Small taxpayers	0.11	0.14	0.20	1	0.24	0.04
Row-vector (sum)	2.31	2.48	9.20	22.00	5.73	1.00
Consistency evaluation	$\lambda_{\max} = 4.10, I_C = 0.034, I_{CR} = 0.037$					

Table 10: Local priorities of the fourth level elements by "Tax awareness level" criterion

Line numbers and names of compared elements	Numbers of compared elements				Priority vector, \bar{u}_i	Local priorities, u_i
	1	2	3	4		
1. Government	1.00	1.00	5.00	3.00	1.97	0.37
2. Controlling bodies	1.00	1.00	5.00	7.00	2.43	0.46
3. Large taxpayers	0.20	0.20	1.00	3.00	0.59	0.11
4. Small taxpayers	0.33	0.14	0.33	1	0.35	0.07
Row-vector (sum)	2.53	2.34	11.33	14.00	5.34	1.00
Consistency evaluation	$\lambda_{\max} = 4.18, I_C = 0.059, I_{CR} = 0.065$					

Table 11: Local priorities of the fourth level elements by "Retrainability" criterion

Line numbers and names of compared elements	Numbers of compared elements				Priority vector, \bar{u}_i	Local priorities, u_i
	1	2	3	4		
1. Government	1.00	0.50	0.20	0.33	0.43	0.08
2. Controlling bodies	2.00	1.00	0.20	0.50	0.67	0.12
3. Large taxpayers	5.00	5.00	1.00	5.00	3.34	0.61
4. Small taxpayers	3.00	2.00	0.20	1	1.05	0.19
Row-vector (sum)	11.00	8.50	1.60	6.83	5.49	1.00
Consistency evaluation	$\lambda_{\max} = 4.17, I_C = 0.057, I_{CR} = 0.063$					

Table 12: Local priorities of the fourth level elements by "Individual response to tax situation" criterion

Line numbers and names of compared elements	Numbers of compared elements				Priority vector, \bar{u}_i	Local priorities, u_i
	1	2	3	4		
1. Government	1.00	1.00	0.33	0.20	0.51	0.10
2. Controlling bodies	1.00	1.00	0.33	0.25	0.54	0.10
3. Large taxpayers	3.00	3.00	1.00	0.33	1.32	0.26
4. Small taxpayers	5.00	4.00	3.00	1	2.78	0.54
Row-vector (sum)	10.00	9.00	4.67	1.78	5.14	1.00
Consistency evaluation	$\lambda_{\max} = 4.086, I_C = 0.028, I_{CR} = 0.031$					

Table 13: Local priorities of the fourth level elements by "Subjective evaluation of taxation aspects" criterion

Line numbers and names of compared elements	Numbers of compared elements				Priority vector, \bar{u}_i	Local priorities, u_i
	1	2	3	4		
1. Government	1.00	0.33	0.20	0.20	0.34	0.06
2. Controlling bodies	3.00	1.00	0.50	0.20	0.74	0.14
3. Large taxpayers	5.00	2.00	1.00	0.33	1.35	0.25
4. Small taxpayers	5.00	5.00	3.00	1	2.94	0.55
Row-vector (sum)	14.00	8.33	4.70	1.73	5.37	1.00
Consistency evaluation	$\lambda_{\max} = 4.163, I_C = 0.054, I_{CR} = 0.06$					

Table 14: Local priorities of the fourth level elements by "Trust in government and taxation system" criterion

Line numbers and names of compared elements	Numbers of compared elements				Priority vector, \bar{u}_i	Local priorities, u_i
	1	2	3	4		
1. Government	1.00	1.00	5.00	7.00	2.43	0.44
2. Controlling bodies	1.00	1.00	5.00	5.00	2.24	0.40
3. Large taxpayers	0.20	0.20	1.00	1.00	0.45	0.08
4. Small taxpayers	0.14	0.20	1.00	1	0.41	0.07
Row-vector (sum)	2.34	2.40	12.00	14.00	5.53	1.00
Consistency evaluation	$\lambda_{\max} = 4.014, I_C = 0.0048, I_{CR} = 0.005$					

Table 15: Local priorities of the fourth level elements by "Emotional and volitional robustness of taxation subject" criterion

Line numbers and names of compared elements	Numbers of compared elements				Priority vector, \bar{u}_i	Local priorities, u_i
	1	2	3	4		
1. Government	1.00	4.00	5.00	5.00	3.16	0.58
2. Controlling bodies	0.25	1.00	1.00	5.00	1.06	0.19
3. Large taxpayers	0.20	1.00	1.00	3.00	0.88	0.16
4. Small taxpayers	0.20	0.20	0.33	1	0.34	0.06
Row-vector (sum)	1.65	6.20	7.33	14.00	5.44	1.00
Consistency evaluation	$\lambda_{\max} = 4.22, I_C = 0.075, I_{CR} = 0.083$					

Table 16: Local priorities of the fourth level elements by "Rate of adaptation to new conditions of activity" criterion

Line numbers and names of compared elements	Numbers of compared elements				Priority vector, \bar{u}_i	Local priorities, u_i
	1	2	3	4		
1. Government	1.00	3.00	0.33	0.20	0.67	0.13
2. Controlling bodies	0.33	1.00	0.33	0.20	0.39	0.07
3. Large taxpayers	3.00	3.00	1.00	0.33	1.32	0.25
4. Small taxpayers	5.00	5.00	3.00	1	2.94	0.55
Row-vector (sum)	9.33	12.00	4.67	1.73	5.31	1.00
Consistency evaluation	$\lambda_{\max} = 4.162, I_C = 0.054, I_{CR} = 0.06$					

Table 17: Local priorities of the fourth level elements by "Individual readiness to make decisions and take measures in terms of taxation" criterion

Line numbers and names of compared elements	Numbers of compared elements				Priority vector, \bar{u}_i	Local priorities, u_i
	1	2	3	4		
1. Government	1.00	3.00	3.00	0.33	1.32	0.27
2. Controlling bodies	0.33	1.00	0.50	0.20	0.43	0.09
3. Large taxpayers	0.33	2.00	1.00	0.50	0.76	0.16
4. Small taxpayers	3.00	5.00	2.00	1	2.34	0.48
Row-vector (sum)	1.00	3.00	3.00	0.33	4.84	1.00
Consistency evaluation	$\lambda_{\max} = 4.24, I_C = 0.08, I_{CR} = 0.089$					

Table 18: Local priorities of the fourth level elements by "Participation in or support of public initiatives in terms of taxation" criterion

Line numbers and names of compared elements	Numbers of compared elements				Priority vector, \bar{u}_i	Local priorities, u_i
	1	2	3	4		
1. Government	1.00	3.00	0.33	0.20	0.67	0.13
2. Controlling bodies	0.33	1.00	0.20	0.20	0.34	0.06
3. Large taxpayers	3.00	5.00	1.00	2.00	2.34	0.45
4. Small taxpayers	5.00	5.00	0.50	1	1.88	0.36
Row-vector (sum)	9.33	14.00	2.03	3.40	5.23	1.00
Consistency evaluation	$\lambda_{\max} = 4.23, I_C = 0.078, I_{CR} = 0.087$					

Table 19: Local priorities of the fourth level elements by "Socio-economic role in terms of taxation" criterion

Line numbers and names of compared elements	Numbers of compared elements				Priority vector, \bar{u}_i	Local priorities, u_i
	1	2	3	4		
1. Government	1.00	1.00	5.00	7.00	2.43	0.47
2. Controlling bodies	1.00	1.00	3.00	3.00	1.73	0.33
3. Large taxpayers	0.20	0.33	1.00	5.00	0.76	0.15
4. Small taxpayers	0.14	0.33	0.20	1	0.31	0.06
Row-vector (sum)	2.34	2.67	9.20	16.00	5.24	1.00
Consistency evaluation	$\lambda_{\max} = 4.265, I_C = 0.08, I_{CR} = 0.09$					

Table 20: Local priorities of the fourth level elements by "Behavior patterns of surrounding subjects of taxation" criterion

Line numbers and names of compared elements	Numbers of compared elements				Priority vector, \bar{u}_i	Local priorities, u_i
	1	2	3	4		
1. Government	1.00	0.33	0.33	0.20	0.39	0.07
2. Controlling bodies	3.00	1.00	0.33	0.20	0.67	0.13
3. Large taxpayers	3.00	3.00	1.00	0.33	1.32	0.25
4. Small taxpayers	5.00	5.00	3.00	1	2.94	0.55
Row-vector (sum)	1.00	0.33	0.33	0.20	5.31	1.00
Consistency evaluation	$\lambda_{\max} = 4.162, I_C = 0.054, I_{CR} = 0.06$					

Table 21: Local priorities of the fourth level elements by "Tax behavior alternatives availability and risks" criterion

Line numbers and names of compared elements	Numbers of compared elements				Priority vector, \bar{u}_i	Local priorities, u_i
	1	2	3	4		
1. Government	1.00	2.00	0.20	0.20	0.53	0.10
2. Controlling bodies	0.50	1.00	0.20	0.20	0.38	0.07
3. Large taxpayers	5.00	5.00	1.00	0.33	1.70	0.31
4. Small taxpayers	5.00	5.00	3.00	1	2.94	0.53
Row-vector (sum)	11.50	13.00	4.40	1.73	5.55	1.00
Consistency evaluation	$\lambda_{\max} = 4.249, I_C = 0.08, I_{CR} = 0.09$					

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