6th International Scientific Conference
May 13–14, 2010, Vilnius, Lithuania
BUSINESS AND MANAGEMENT 2010
Selected papers. Vilnius, 2010

ISSN 2029-4441 print / ISSN 2029-428X CD
doi:10.3846/bm.2010.095
http://www.vgtu.lt/en/editions/proceedings

TAX SYSTEM EVALUATION MODEL

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Abstract. The main problem examined in current article is the evaluation of the tax system as a uniform totality. The crystallization of shortcomings of the tax system evaluation methods has been followed by justification of the development of a tax system evaluation model. It is suggested that tax systems should be evaluated through the hierarchic evaluation system consisting of primary, partial-integrated and complex-integrated indicators. Primary non-recurrent indicators are classified into three groups and aimed at evaluating the tax system through the prism of a certain aspect. The synthesis of partial integrated indicators creates preconditions for complex evaluation of tax systems. The identified significance levels of indicators demonstrate the relation between the indicators and their impact on the final evaluation. Complex tax system evaluation provides (with) a possibility to conduct a systematic analysis and to generate a quantitative estimate.

Keywords: tax system, multicriteria evaluation, methods, indicator.

1. Introduction

Economic globalisation and interstate integration promote qualitative changes in tax systems with the view to creating a favourable medium for business development and attracting foreign investments aimed at creating conditions for the development of economies. In this light, evaluation of the tax system is a key precondition for constructive improvement thereof. Having systematised the suggestions for evaluating tax systems contained in specialised literature (Gill 2000; Vlassenko 2001; Bernardi *et al*. 2005; Tax...2006), there have come to light three methods of essentially different contents: 1) classical principles of taxation with their characteristic indices; 2) Tanzi's qualification diagnostic indicators; 3) Gill's diagnostic indicators. The first method involves evaluation, by quantitative indicators, of each classical principle of taxation as identified in the tax theory (fairness (equity), efficiency, elasticity, simplicity of tax administration) followed by a comparative analysis. The second method deals with evaluation of tax systems by answers to the qualification diagnostic indicators, as made specific by their content, suggested by Tanzi. Application of the third method involves a detail revenue collection analysis according to the set of indicators suggested by Gill. Each of these methods is used to evaluate different aspects of the tax system (Bivainis, Skačkauskienė 2007).

The conducted empiric studies (Bivainis, Skačkauskienė 2008; Skačkauskienė 2009) revealed certain shortages of the aforementioned methods for the evaluation of tax systems. Evaluation of tax systems on the basis of classical principles of taxation brought about the following major problems: 1) analysis of the principles without integrating them into one whole does not allow evaluating a tax system as a whole and badly restricts the comparative analysis of tax systems; 2) different authors suggest different indicators for the evaluation of one and the same principle; 3) the same indicator is suggested for the evaluation of different principles of taxation (e. g., tax burden indicator is suggested for measuring both tax fairness and simplicity of tax administration; indicator of average tax rate is offered for both tax fairness and efficiency). All this creates some confusion. Evaluations based on the Tanzi's method are focused on the aspects of simplicity of tax system productivity and administration. Such evaluation is not precise also because of uncertainty of indicator questions in terms of both content and measuring. The Gill's method involves evaluation of tax systems using a set of indicators, similarly as in case with the Tanzi's method. But in Gill's method emphasis is placed on the aspect of collecting revenues. The bottleneck of this method lies in the absence of principles to estimate the indicators and ranking scales. The Gill's method omits the general level of tax administration – clear hierarchy of indicators is not identified and global indicator (or a set of such indicators) is absent to integrate the values of partial indicators and provide with evaluation of the general level of tax administration.

Assessments of tax systems available in scientific literature tend to concentrating on the evaluation of individual aspects of these systems and therefore lack multi-sidedness. Therefore, recommendations for the improvement of tax systems lack justification and complexity. Targeted and rational improvement of tax systems requires a multidisciplinary approach to evaluation of tax systems.

This creation encourages of an evaluation method that would enable more comprehensive and objective of tax system evaluation. A fundamental stage in creating such method is development of an evaluation model for a tax system containing specification of the aspects of the tax system to be evaluated and identification of a system of evaluation indices for these aspects. Research aim is to create a model for the evaluation of tax systems enabling comprehensive and objective evaluation thereof, carrying out of dynamic and interstate comparative analyses with the view to enlightening the best practices, identifying relative quality of tax systems and creating preconditions for the justification of the development of recommendations for the improvement of tax systems.

The paper applied the methods of analysis, synthesis, expert analysis and questionnaire survey development of preconditions to create a model for the evaluation of tax systems, to identify the significance of the indicators.

2. Justification of the composition and significance of primary indicators

A system recommended for all-embracing evaluation of tax system consists of primary, partial-integrated and complex-integrated indicators. Primary indicators are classified into three groups, each of them being designed for the evaluation of tax system by a certain aspect. The system of the above-mentioned indicators is built taking into account the requirements of consistency, impact on the body of interest, comparability and simplicity, and aimed at more objective and accurate evaluation of tax systems. Non-recurrent indicators are classified into groups so as to extensively characterise tax fairness, efficiency and complexity of tax administration.

Fairness (equity). In the context of taxation, the category of fairness (equity) consists of three components: 1) fair taxation of income; 2) fair distribution of tax burden; 3) fair and objective taxation rules. To characterise fairness, a set of indicators should have integrated all the above-mentioned components of fairness (equity). Therefore, I used various recommendations for building a set of non-recurrent quantitative indicators integrating the components of fair income taxation and distribution of tax burden. I recommend the following qualitative indicators to be used for the measuring of taxation rules: transparency (publicity) and complexity of the tax dispute process. The suggested transparency (publicity) indicator is to be used to measure transparency, accurateness and accessibility of taxation legislation. Surveys have proved that the more transparent and comprehensive are taxation laws and secondary legislation, the higher is tax revenue. The indicator of the taxation dispute process extends the measurement of tax fairness (equity) by adding taxpayers' understanding of equity in tax system. This indicator shall be used to judge on the institute of tax disputes, i.e., impartiality of the institute and complexity of disputes. The quality of the dispute settlement process is the key indicator reflecting enforcement of taxpayers' rights (Potter 2005).

Efficiency. A tax system is deemed to be efficient when it ensures, on the one hand, sufficient amount of tax revenue for the fulfilment of obligations assumed by the state and, on the other hand, as minimal as possible tax effects on the decisions of market operators, i.e., market operators are not encouraged to invest into a certain activity on account of another one or to allocate funds for consumption instead of investment, and vice versa. There are some proposals found in research works in relation to the first aspect of tax efficiency. The indicator of tax effects on the decisions of market operators is important in measuring economic efficiency of taxation, as application of different taxation conditions to certain activities or types of resources distorts decision-making priorities in market operators and impacts on the collection of tax revenue. This qualitative indicator of tax effects on the decisions of market operators is suggested with the view to all-embracing evaluation of taxation efficiency. Such an analysis would reveal peculiarities of taxation imposed on certain activities and different types of resources.

Complexity of tax administration. As for the analysis of tax administration, for a long time emphasis was placed on the costs of tax collection only. However, a somewhat wider analysis of another aspect of this category has been observed in recent research works. It is the costs carried by taxpayers to meet their tax obligations. In this approach, the number of established taxes is also considered to be a measure of complexity of tax administration. It is therefore reasonable to analyse the complexity of tax administration in the following sections: 1) complexity of collecting taxes; 2) complexity of tax computation and payment, reasonability of the number of tax types, transparency of tax contents and terminology.

Taking into account the requirements raised for indicators and with the view to consistent evaluation, a system of non-recurrent indicators is developed to characterise in detail tax fairness (equity), efficiency and complexity of tax administration (Table 1).

Table 1. A system of indicators for evaluation

Group of indicators (aspect of tax system at issue)	Indicator	Purpose of evaluation
1	2	3
Fairness	Gini index	To identify taxation effects on the fairness (equity) in the distribution of taxpayers' income
	Horizontal equity (fairness) index	To identify taxation equity in taxpayers found in a similar social-economic situation
	National tax burden	To identify the amount of taxes paid by taxpayers, as compared to domestic product generated in the country
	Labour income average tax rate	To identify the scope of taxes imposed on income from employment
	Capital income average tax rate	To identify the scope of capital taxation
	Average tax rate on consumption	To identify the scope of consumption taxation
	Transparency (publicity) indicator	To define transparency of and accessibility to legislation
	Tax-related disputes process complexity indicator	To define impartiality of the dispute settlement institute and complexity of the dispute settlement process
Efficiency	Elasticity of tax system	To identify the rate of growth of taxable income (as compared to economic growth)
	Ratio of real to the statutory standard tax rates	To identify tax efficiency (potential of increasing taxation)
	Difference between the real and statutory standard tax rates	To identify the scope of exceptions and privileges
	Tax impact on entities' decisions	To identify tax effects on the distribution of resources and revenue collection
Complexity of tax administration	Ratio of administrative costs to tax revenues	To identify tax collection costs
	Tax gap	To identify the scope of tax avoidance, evasion and shadow economy
	Quality of assistance provided by the tax administrators	To identify the qualifications of tax administrators
	Efficiency of the tax administrators' activities	To identify modernity and professionalism of resources available to tax administrators
	Corruption index	To identify possibilities for tax avoidance
	Ratio of expenditure for enforcing tax liabilities of taxpayers to the paid in taxes	To identify the costs of computation and payment of taxes
	Type of taxes	To identify the range of taxable base
	Ratio of the number of tax declarations filled to the number of taxpayers	To identify transparency of taxpayer's operations
	Mode of organisation of the revenue administration	To identify the usefulness of specialisation of tax administrators
	Overall organisation of the revenue administration	To identify the quality of performance of tax administrators
	Risk of detection of tax evasions and strictness of consequences of tax evasion	To identify gaps in tax legislation

Each selected evaluation indicator, when applied individually, enables identification of the status of a certain element (uptrend/downtrend in case of dynamic analysis) and gaps in the tax system. A group of indicators (Table 1 column 1) provides with a possibility for extensive evaluation of a certain aspect of tax system and produces a generalised quantitative evaluation of this aspect. The latter is estimated on the basis of the values and significances of the primary indicators. Values of the quantitative indicators of the groups are easily generated analytically or basing on their values available from

various dbases (e. g., Eurostat). The values of the qualitative indicators of the groups are identified basing on the methods of expert analyses, using the selected methodology and evaluation scale (e. g., relative components of a unit, points, etc.). In order to crystallise out the significance of each partial-integrated indicator and its weight in the final evaluation result as well as to correlate the primary indicators and partial-integrated indicators into a uniform totality in the evaluation of tax systems, significance levels of such indicators have been identified. For this purpose, the *AHP* method was applied to conduct research in the following sequence: 1) formation of a group of experts; 2) questionnaire survey of the experts; 3) calculation of matrix complexity indices; 4) identification of compatibility of expert opinions; 5) calculation of values of the given indicators.

Formation of a group of experts. The aim of organising a group of experts is to gather experts representing a wide range of fields. In addition, a special competency-based performance criterion was applied for the selection of experts. Special attention was paid to experts' experience. As a result, six experts were selected from academic, business and public administration fields. Work experience of the experts – 8–14 years.

Questionnaire survey of the experts was conducted individually. At first, experts were given individual questionnaires prepared in respect of each group of indicators with enclosed guidelines. The guidelines stipulated a task given for the experts – to use the pairwise comparison method to evaluate predominance of each indicator in the questionnaire vis-à-vis another indicator in terms of its effects on the evaluation of tax systems, and to substantiate the values given. In addition, the guidelines contained a scaling of relative significance of criteria (Саати 1993) and description of the indicators.

Matrix compatibility indices. To measure compatibility of each matrix, λ_{max} value is used representing the maximum eigenvalue of the given matrix. In literature (Саати 1993), the compatibility index is defined as $S_i = \frac{\lambda_{max} - n}{n-1}$; where n representing the number of compared indicators. The lower is the S_i value, the better is the matrix compatibility. A degree of quantitatively reciprocal symmetric matrix compatibility is defined by comparing the derived compatibility index of the judgement matrix (S_i) to randomly-generated average compatibility of reciprocal symmetric matrix of the same row (according to the scaling of relative significance) S_v (Саати 1993).

The degree of matrix compatibility is estimated as the ratio of matrix compatibility index and the mean random index: $S = \frac{S_i}{S_v}$. The matrix is compatible, if $S \le 0.1$; in some cases $S \le 0.2$ is allowed.

Compatibility of expert opinions. Compatibility ratio S makes it possible to identify compatibility of opinions of each individual expert. Yet, experts' opinions can be contradictory in general. Compatibility of a group of experts is identified by using a concordance coefficient (Podvezko, 2005), which concept relates to the sum of ranks per each indicator with respect to all experts or, to be more specific, it relates to the deviation of values x_i from the arithmetical mean $\bar{x}$ by the sum of squares. The concordance coefficient is calculated using the formula:

$$W = \frac{12S}{r^2 n(n^2 - 1)}, \quad (1)$$

where, r – number of experts.

If the ranks of all indicators as per all expert ratings are identical, the concordance ratio is calculated using the following formula (Podvezko, 2005):

$$W = \frac{12S}{r^2 n(n^2 - 1) - r\sum_{j=1}^{r} T_j}, \quad (2)$$

where, T_j stands for the indicator of related ranks, which is calculated using the formula:

$$T_j = \sum_{k=1}^{h_j} (t_k^3 - t_k), \quad (3)$$

where, h_j stands for number of level ranks of the j^{th} expert; t_k stands for the number of level ranks in the k^{th} group.

M. Kendall (Podvezko 2005) has proved that if the number of analysed indicators is > 7, the significance of the concordance coefficient may be determined using the criterion χ^2, which is calculated using the following formula:

$$\chi^2 = Wr(n-1). \quad (4)$$

Critical value χ^2_{kr} is derived from the table of probability distribution χ^2 with $\nu = n-1$ degree of freedom according to the selected significance level $\alpha = 0{,}05$. If the computed value of χ^2 appears to be higher than χ^2_{kr}, it means that expert estimations

are compatible. When the number of indicators being compared ranges from 1 to 7, the application of probability distribution χ^2 should be exercised with care as the critical value χ^2_{kr} of probability distribution may be higher than the computed one, even though the level of compatibility for expert opinions may still be sufficient. In such a case, the probability tables of the concordance coefficient or the tables of critical values S (with $3 \le n \le 7$) may be applied (Евланов, Кутузов 1978).

Expert opinions are compatible at each stage of research and components thereof with the selected significance level $\alpha = 0{,}05$ (Table 2).

Identification of significance of the given indicators. The experts judged on the following primary indicators of the aforesaid three groups: 6 quantitative and 2 qualitative indicators characterising fairness (equity) of tax system; 3 quantitative indicators and 1 qualitative indicator characterising efficiency of tax system, and 6 quantitative and 5 qualitative indicators characterising complexity of tax system. Significance (weights) of the indicators was evaluated in compliance with the methodology (Саати 1993) in the following order: 1) construction of the reciprocal symmetric matrix "indicators – indicators" to compare the significance of indicators; 2) calculation of the eigenvector as per each matrix row; 3) crystallisation of priority vectors.

Findings of the survey are presented by each analysed aspect of tax system – *fairness (equity), efficiency and complexity of tax administration* – in the following order:

- compatibility of each matrix;
- significance (weights) of the indicators.

Evaluation of fairness (equity). The maximum eigenvalue of the fairness (equity) matrix λ_{max} =10.72; compatibility ratio of experts' matrices is between 0.06 and 0.15. The derived matrix compatibility values do not exceed the set maximum limit. Accordingly, matrices of all experts are suitable for further processing.

The identified values of significance of fairness (equity) indicators are presented in the decreasing order in Table 3 (indicators from 1 through 8). The horizontal fairness (equity) indicator was recognised to be the most significant in terms of fairness judgement. This indicator was identified as particularly important by a business representative expert. The least weight was given to the indicators of transparency (publicity) and complexity of the tax-related dispute process. Such expert opinion was to a certain extent determined by the qualitative nature of both the aforesaid indicators what made it difficult to formalise them.

Evaluation of efficiency. The maximum eigenvalue of the efficiency matrix $\lambda_{max} = 4.4$; matrix compatibility indices of individual experts fluctuates between 0.03 and 0.12; compatibility ratio ranges from 0.04 to 0.14. The best compatibility is seen in the matrix of the expert representing public administration. The derived matrix compatibility values do not exceed the set maximum limit. Accordingly, judgement matrices of all experts are suitable for further processing.

The elasticity indicator was recognised as the most significant in terms of judging on efficiency. It accounted for 46 % of overall significance of efficiency judgement indicators (Table 3, indicators from 9 through 12). This indicator was identified as particularly important by experts representing business, academic and public administration fields (one expert in each field). The least weight was given to the qualitative indicator of tax effects on the distribution of resources.

Evaluation of complexity of tax administration. Evaluation of the complexity of tax administration was divided into two parts due to a big number of judgement indicators. One matrix consisted of quantitative indicators and the other one was comprised of qualitative indicators. The maximum eigenvalue of the efficiency matrix of quantitative and qualitative indicators for the complexity of tax administration λ_{max} =10.97 and λ_{max} =10.44 respectively; compatibility ratio of matrices of individual experts ranged within the interval [0.03; 0.16]. The best compatibility was seen in the matrix of the expert representing public administration. The derived evaluation matrix compatibility values did not exceed the set maximum limit. Accordingly, matrices of all experts were suitable for further processing.

Table 2. Characteristics of compatibility of expert opinions

Aspect of tax system at issue	Type of research	Parameters of compatibility of opinions						Degree of compatibility of opinions
		x_i	S	W	χ^2	χ^2_{kr}	v	
Fairness	Mixed	144	406	0.61	17.02	14.07	7	compatible
Efficiency	Mixed	40	66	0.83	9.9	7.8	3	compatible
Complexity of tax administration	Quantitative	180	642.5	0.67	21.4	15.51	8	compatible
	Qualitative	144	344	0.51	14.4	14.07	7	compatible

The significance of each matrix indicators for the complexity of tax administration was calculated separately and the obtained values were normalised so that summing of significances of the quantitative and qualitative indicators would not violate the principle $\sum_{i=1}^{n} \omega_i = 1$, ($i$ = 1, 2, ..., n).

The identified values of significance of indicators for the complexity of tax administration are presented in Table 3 (indicators from 13 through 23). The indicator for the quality of tax administrators' assistance was recognised to be the most significant. The least weight was given to the indicator reflecting the difference between the number of filled in tax returns and the number of tax payers and the indicator reflecting the difference between costs of meeting taxpayers' obligations and paid in taxes (indicators s_{10} and s_{11}); significance values of each of them did not exceed 6 % of overall significance of the indicators.

3. Hierarchic evaluation system: contents and values of partial-integrated and complex-integrated indicators

The system built on the hierarchic principle presupposes comprehensive evaluation of tax system (Fig. 1). Grouping of indicators allows clear identification of interrelations between/among indicators and their contribution to the final evaluation. The value of partial-integrated indicator in each group, i. e., fairness (T), efficiency (E), complexity of tax administration (S), is calculated using the following formulas:

$$T = \sum_{i=1}^{n} \omega_i t_i ; \quad (5)$$

$$E = \sum_{i=1}^{n} \omega_i e_i ; \quad (6)$$

$$S = \sum_{i=1}^{n} \omega_i s_i ; \quad (7)$$

Table 3. The identified values of significance of fairness (equity), efficiency and the complexity of tax administration

No	Indicators		Values of significances
	symbol	name	
1	t_1	Horizontal equity (fairness) index	0.19
2	t_2	Labour income average tax rate	0.18
3	t_3	Average tax rate on consumption	0.17
4	t_4	National tax burden	0.15
5	t_5	Capital income average tax rate	0.14
6	t_6	Gini index	0.07
7	t_7	Transparency (publicity) indicator	0.05
8	t_8	Tax-related disputes process complexity indicator	0.05
9	e_1	Elasticity of tax system	0.46
10	e_2	Ratio of real to the statutory standard tax rates	0.35
11	e_3	Difference between the real and statutory standard tax rates	0.14
12	e_4	Tax impact on entities' decisions	0.05
13	s_1	Quality of assistance provided by the tax administrators	0.13
14	s_2	Ratio of administrative costs to tax revenues	0.12
15	s_3	Tax gap	0.12
16	s_4	Corruption index	0.12
17	s_5	Type of taxes	0.10
18	s_6	Efficiency of the tax administrators' activities	0.08
19	s_7	Mode of organisation of the revenue administration	0.08
20	s_8	Overall organisation of the revenue administration	0.07
21	s_9	Risk of detection of tax evasions and strictness of consequences of tax evasion	0.07
22	s_{10}	Ratio of the number of filled in tax returns to the number of taxpayers	0.06
23	s_{11}	Ratio of expenditure for enforcing tax liabilities of taxpayers to the paid in taxes	0.06

where: *t*, *e*, *s* – values of primary indicators reflecting the content of fairness (equity), efficiency and complexity of tax administration; ω_i – significance (weight) of a relevant indicator.

Significance of partial-integrated indicators is identified using analogue evaluation methodology as in case of significance of primary indicators. The conducted survey revealed the following findings:

– the maximum matrix eigenvalue $\lambda_{max} = 3.17$; compatibility indices of various experts' matrices – within the range from 0.03 to 0.08; consistency ratio – from 0.05 to 0.11. The obtained matrix compatibility values do not exceed the set maximum limit, i. e., judgement matrices of all experts are suitable for further processing;

– expert opinions are compatible. This is seen from the following characteristics of opinion compatibility: general (total) sum of ranges $\sum_{i=1}^{n} x_i = 24$, mean of indicator rankings $\bar{x} = 8$, sum of square deviations $S = 26$, concordance coefficient $W = 0{,}81$, respective $\chi^2 = 6.5$ is higher than the critical value $\chi^2_{kr} = 6.0$ with $v = 3 - 1 = 2$ degree of freedom and $\alpha = 0.05$ level of significance;

the partial-integrated indicator of fairness (equity) in taxation is ranked as the most significant in the evaluation of tax system. It accounts for 58 % of the significance of all indicators (Table 4). The lowest rating is given to the indicator of complexity of tax administration.

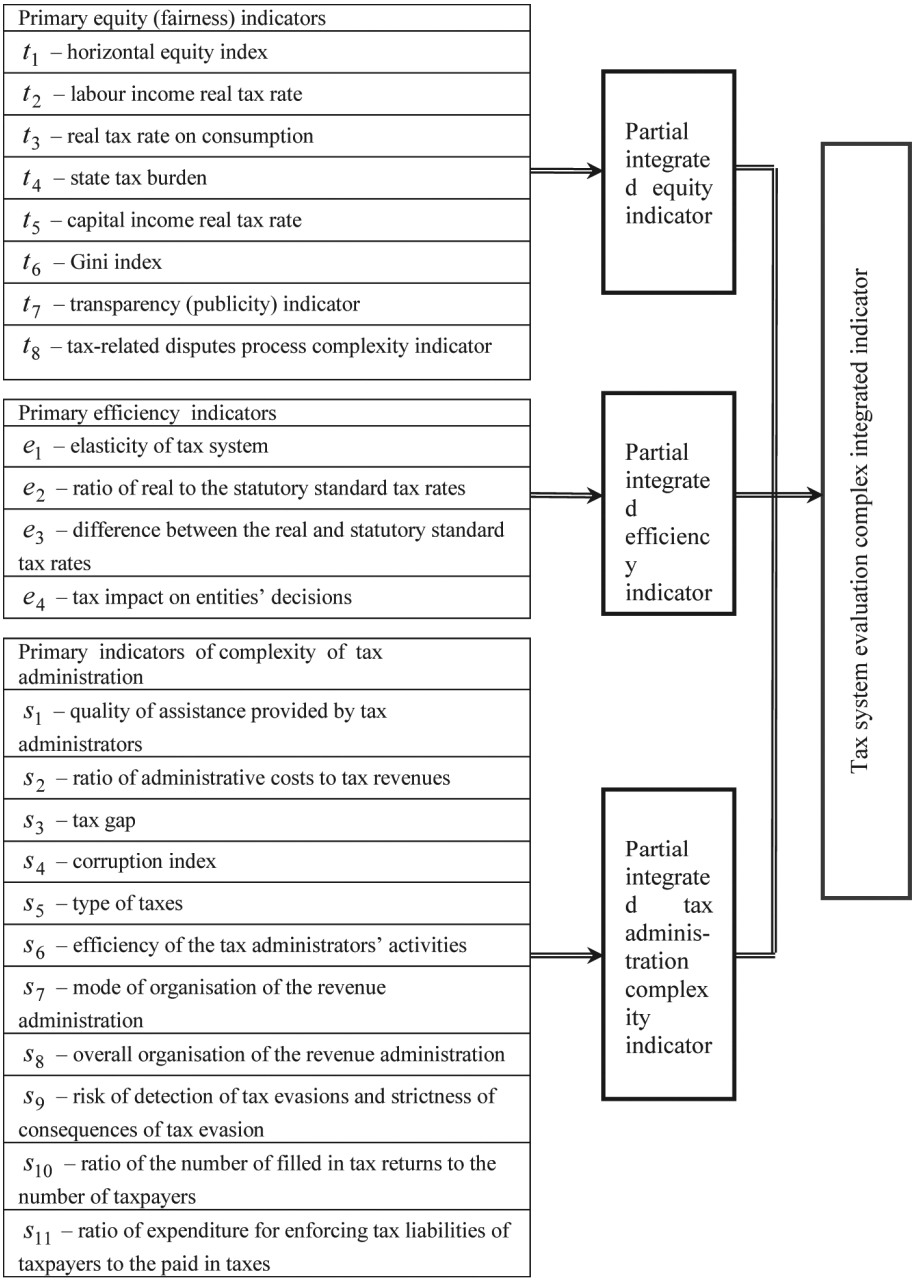

Fig. 1. Complex tax system evaluation scheme

Table 4. The identified values of significance of tax system quality

Indicators		Values of significances
symbol	name	
T	Fairness (equity)	0,58
E	Efficiency	0,32
S	Complexity of tax administration	0,10

The synthesis of partial integrated indicators creates preconditions for the complex evaluation of tax systems with the view to identifying the quality of tax systems and comparing tax systems of various countries. Tax system evaluation complex-integrated indicator (*M*) shows overall estimate of the tax system and is equal to the sum of values of partial integrated indicators, as multiplied with relevant significance levels:

$$M = \omega_1' T + \omega_2' E + \omega_3' S . \quad (8)$$

Basing on the significance of partial-integrated indicators established during the survey, formula (8) can be written as follows:

$$M = 0{,}58T + 0{,}32E + 0{,}1S . \quad (9)$$

According to the expert evaluation method, the weights (significance) of the qualitative indicators are defined in ranking points in accordance with the chosen ranking scale. Taking into account that the group of experts judged upon several indicators and each expert has his/her own vision of the evaluation (ranking) scale, it is reasonable to apply formula:

$$z_i = \left(\sum_{i=1}^{m} (z_{ij} \Big/ \sum_{j=1}^{n} z_{ij}) \right) \Big/ r , \quad (10)$$

where z_{ij} – evaluation of i^{th} indicator by j^{th} expert in points.

Application of this formula allows normalising and calculating the arithmetical mean of the values of each indicator.

With the view to comparability of the quantitative indicators expressed in various measuring units, it is necessary to normalise the values of the indicators. In addition, attention must be paid to the content of the indicators, i. e., what value (higher or lower) indicates a better situation. In the given case, values of the indicators should be reduced in accordance with the following formula: $z^* = 1 - z_i'$, where z_i' is the normalised value of the indicator. This reduction rule should be applied in respect of the following indicators of the proposed model for complex evaluation of tax system: Gini index, difference between the real and statutory standard tax rates, tax gap, ratio of expenditure for enforcing tax liabilities of taxpayers to the paid in taxes.

The constructed evaluation model can be applied in various instances of tax system evaluation. First of all, the complex tax system evaluation model gives a possibility to monitor the tax system as a whole and to take reasoned decisions in case of certain changes, thus reducing the factor of subjectivity characteristic to political discussions about improvements in the tax system. The proposed system of indicators enables consistent and extensive evaluation of the tax system, constructive identification of its advantages and disadvantages, justification of recommendations concerning improvements in the tax system with the view to target building of tax policies and managing implementation of the tax policy.

Grouping of indicators, as presented in the model, allows analysing the tax system in the light of three aspects describing the tax system in detail. Partial-integrated indicators enable systematic analysis of a certain aspect and obtaining a generalised quantitative expression of the tax system evaluation. This is particularly helpful in case of dynamic analyses, identification of change developments for a particular indicator and its impact on the tax system situation. On the one hand, the proposed evaluation of the tax system reduces evaluation-related costs and, on the other hand, provides with grounds to generate reliable evaluation.

The identified weights of indicators give specific expression to the relationship between/ among indicators and final evaluation thereof. In its turn, this enables identification of prioritised areas of the tax system and defining in detail the factors determining evaluation results in these areas. The structured evaluation system can be adapted to various needs of evaluators/judges. Grouping of the indicators enables elimination of some indicators or introduction of new ones without destroying the established system of weights (significance) of indicators. It is enough to simply adjust the weights of indicators within a relevant group. Evaluators are therefore able to adjust the composition of indicator groups without violating the overall methodology, i. e., to flexibly apply evaluation system according to the needs and changing environment.

The evaluation model can be meaningfully applied not only for the analysis of tax system of a particular country, but also for the comparison of tax systems of various countries, identification of their strengths and weaknesses (current situation), trends of changes and complex evaluation of the analysed aspects. The interstate comparative analysis of tax systems can serve as a useful in-

strument to reveal the relative quality of tax systems in various countries, to crystallise out the best practices that could be used for improvement of the quality of tax system in a particular country.

4. Conclusions

The analysis and synthesis of the findings of the empirical studies revealed bottlenecks in tax system evaluation methods impeding extensive evaluation of tax systems, such as analysis of taxation principles without combining them into one whole, abundance, duplication, and uncertainty of indicators. The analysis and synthesis of the tax system evaluation methods and approaches of various authors created preconditions for the development of a tax system evaluation method using advantages of the existing methods, eliminating their bottlenecks and supplementing the evaluation with non-recurrent indicators, thus providing with a possibility for comprehensive and objective evaluation of tax systems.

It is suggested that tax systems should be evaluated through the hierarchic evaluation system consisting of primary, partial-integrated and complex-integrated indicators. Primary non-recurrent indicators are classified into three groups and aimed at evaluating tax system through the prism of a certain aspect. The system is built taking into consideration the requirements of consistency, comparability and simplicity, and aimed at objective and accurate evaluation of tax systems. The synthesis of partial integrated indicators creates preconditions for complex evaluation of tax systems enabling identification of the quality of tax systems and comparison of tax systems of various countries. The identified significance levels of indicators demonstrate the relation between/among the indicators and their impact on final evaluation. Complex tax system evaluation provides with a possibility to conduct a systematic analysis of a tax system as a uniform totality and to generate a quantitative estimate.

The recommended complex tax system evaluation model has the following advantages: 1) quantitative evaluation of a tax system adds to objectivity of the evaluation, creates preconditions to substantiate tax system improvement recommendations on the basis of fiscal estimates; 2) the evaluation model creates preconditions to analyse tax systems as a uniform totality, to identify their standing in various aspects correlated in quantitative terms, and to carry out dynamic and comparative analyses, i.e., consistent and accurate evaluation of tax system; 3) interstate comparative analysis of tax systems creates preconditions to reveal relevant quality of tax systems in various countries, to crystallise out the best practices that could be used for improvement of the quality of the tax system in the country at issue; 4) the evaluation system could be adapted to various needs of the evaluator: classification of indicators into groups enables elimination of some indicators or introduction of new ones without destroying the established system of significance of the indicators, simply by adjusting significance levels within the group.

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