Lyubov Afanasyeva
PhD (Economics), Associate Professor of
the Economic Security and Taxation Department,
Southwest State University, Kursk, Russia
94, 50 Let Oktyabrya Str., Kursk, 305040, Russia
lv_af@mail.ru

Tatyana Tkacheva
PhD (Economics), Associate Professor, Head of
the Economic Security and Taxation Department,
Southwest State University, Kursk, Russia
94, 50 Let Oktyabrya Str., Kursk, 305040, Russia
tat-tkacheva@yandex.ru

Comparative approach to the tax security assessment

Abstract. *Introduction.* Formation of the competitive economy of any state is impossible without effective tax policy. Effective tax policy is a source of economic growth and, as a rule, it manifests itself in macroeconomic and financial stability, the increase of business activities of economic entities, raising the level and quality of life of the population, in the realization of strategic infrastructural projects, etc. Tax policy in major economies of the world is heterogeneous; it depends on the scale and structure of the existing tax system, tax regulation and stability.

The authors' proposed method of tax security estimating at the macro-level consists of the following stages: constructing a hierarchy of goals of tax security of the state; defining of priorities vector using the method of paired comparisons for all levels of the hierarchy; standardizing (normalizing) of the variables of the third level, that is, bringing the dimensional units of parameters measurement that form tax security to a unified range of values. While analyzing and estimating taxable capacity and tax risks, we consider taxes on income, profits and capital gains, taxes on goods and services, insurance premiums in the Organization for Economic Cooperation and Development (OECD) countries.

The authors of the article substantiate methodical recommendations on the assessment of the tax security of the state (on the materials of OECD countries). The advantage of the proposed method is usage of publicly available information on the most important indicators of the state tax policy's efficiency.

Keywords: Taxable Capacity; Tax Security; OECD Countries; Tax Risk

JEL Classification: F01; H56; O57

Афанас'єва Л. В.
кандидат економічних наук, доцент кафедри економічної безпеки й оподаткування,
Південно-Західний державний університет, Курськ, Російська Федерація
Ткачова Т. Ю.
кандидат економічних наук, доцент, завідувач кафедрою економічної безпеки й оподаткування,
Південно-Західний державний університет, Курськ, Російська Федерація

Компаративний підхід в оцінці податкової безпеки

Анотація. Авторами статті обґрунтовані методичні рекомендації з оцінки податкової безпеки держави (на матеріалах країн ОЕСР). Перевагою запропонованої методики є використання загальнодоступної інформації щодо найбільш важливих індикаторів ефективності податкової політики держави.
Ключові слова: податковий потенціал; податкова безпека; країни ОЕСР; податковий ризик.

Афанасьева Л. В.
Кандидат экономических наук, доцент кафедры экономической безопасности и налогообложения,
Юго-Западный государственный университет, Курск, Российская Федерация
Ткачева Т. Ю.
Кандидат экономических наук, доцент, заведующая кафедрой экономической безопасности и налогообложения,
Юго-Западный государственный университет, Курск, Российская Федерация

Компаративный подход в оценке налоговой безопасности

Аннотация. Авторами статьи обоснованы методические рекомендации по оценке налоговой безопасности государства (на материалах стран ОЭСР). Достоинством предлагаемой методики является использование общедоступной информации по наиболее важным индикаторам эффективности налоговой политики государства.
Ключевые слова: налоговый потенциал; налоговая безопасность; страны ОЭСР; налоговый риск.

1. Problem statement. While studying globalization as a modern process, it should be noted that the formation of a competitive economy of any state is impossible without ensuring the economic security of the state in the context of effective tax policy development. Effective tax policy is a source of economic growth and manifests itself, as a rule, in macroeconomic and financial stability, the increase of business activity of economic entities, raising the level and quality of life of the population, in the realization of strategic infrastructural projects, etc. [1, p. 58]. Tax policy of major economies of the world is heterogeneous; it depends on the scale and structure of the existing tax system, tax regulation and stability.

2. Brief literature review. The fundamentals of economic security theory have been formed by A. Litvinenko (2013) [2], V. Plotnikov (2010) [3], V. Senchagov (2010) [4], B. Fischhoff, S. Watson, C. Hope (1984) [5], W. Hudson (1996) [6], A. Wilett (1901) [7]. Methodological and practical issues of tax policy and tax security of the state were developed in the works of R. A. Musgrave (2009) [8], A. Shah (1994) [9], E. V. Balats-

kiy (2003) [10], L. I. Goncharenko (2011) [11], I. A. Maybu-rov (2012) [12], V. G. Panskov (2013) [13], L. V. Sevryukova, N. S. Trusova (2014) [14].

3. The purpose of the article is to substantiate the authors' method of estimating tax security of the state (on the example of materials of OECD countries).

4. Results. Effective tax policy is the foundation of tax security of the state [15]. Based on the fact that tax and expenditure relations represent interaction between categories of taxes and budget; expand the scope of budgetary and tax legal relations at all levels of the budgetary system [16, p. 143], then, we believe, tax security of any country can be seen as a state of protection of tax relations from internal and external threats, which forms taxable capacity, retains fiscal stability and provides a country's tax competitiveness on the world stage.

In the context of development of foreign countries' tax systems, tax security acquires an independent role, since it is a component of economic security of the state as the recipient

of taxes in budget revenues with the aim of socio-economic development [17, p. 65].

The authors' proposed method of assessing tax security of the state has been represented in several previous authors' researches [16-18] and is given below as a methodological basis of future calculations. It consists of the following stages:

Stage 1. The construction of a hierarchy of goals of tax security of the state.

Stage 2. The definition of priorities vector with the usage of paired comparisons method for all levels of the hierarchy.

Stage 3. Standardization (normalization) of the variables of the third level, i.e. bringing the dimensional units of parameters measurement that form tax security to a unified range of values:

$$z_i = \frac{k_i}{k_{cp}} \ , \tag{1}$$

where z_i is standardized (normalized) coefficient;
k_i - actual value of risk potential factor;
k_{cp} - mean value of risk potential factor in OECD.

Stage 4. The calculation of integrated indicators of the second level of tax security:

$$\Pi it = \sum z_i t \times k_{ni}, \tag{2}$$

$$Pit = \sum z_i t \times k_{pi} , \tag{3}$$

where Πit is integrated indicator of taxable capacity of a country i for the considered period of time t;
Pit - integrated indicator of tax risk of a country i for the considered period of time t;
k_{ni}, k_{pi} - weighting coefficients of capacity and risk indicators (correspondingly, they are numerically equal to normalized priorities obtained by the method of paired comparisons);
z_{it}, z_{it} - values of indicators which characterize taxable capacity and risk, correspondingly, for the considered period of time t;
i - the number of indicators under study.

Stage 5. The calculation of tax security indicator (*TS*) (global goal):

$$TS_{it} = \sum \Pi it \times k_{capacity} + \sum Pit \times k_{risk} , \tag{4}$$

where TS_{it} is tax security of a country i for the considered period of time t;

Stage 6. The interpretation of the state's tax security assessment results.

The most important taxes in the formation and development of taxable capacity of OECD countries are the taxes on income, taxes on goods, services and the premiums [18, p. 174].

In the capacity of performance indicators, there were used the following indicators of OECD countries to assess tax security: «taxes on income, profits and capital gains; taxes on goods and services», «insurance premiums».

In accordance with the stage 1, there has been constructed the hierarchy of goals for assessing tax security of OECD countries (Figure 1).

The second step consisted in obtaining the vector of priorities of the second level by means of the matrix (the results are presented in Figure 1); for the second level of the hierarchy there were constructed two matrices, corresponding to the third level of the hierarchy. To define the relative importance of the hierarchy elements there was used a ratio scale [19, p. 53].

Standardization (normalization) of the variables of the third level, i.e. bringing the dimensional units of parameters measurement that form tax security to a unified range of values allowed us to calculate the integra-
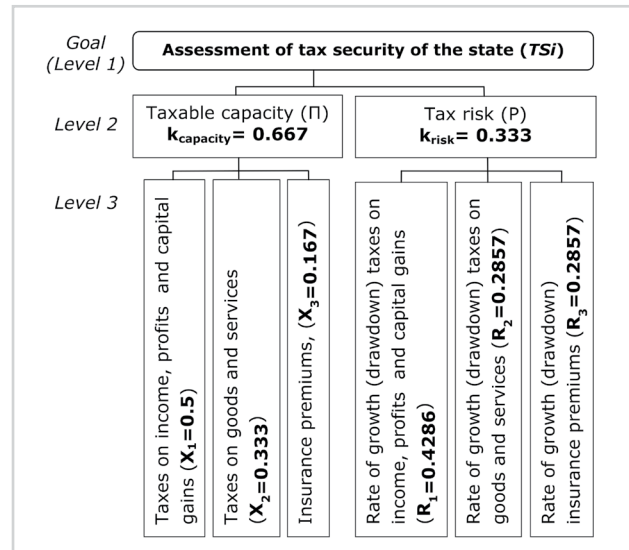

Fig. 1: **Hierarchy of goals for the budget and tax security assessing**
Source: Made up and calculated by the authors

ted index of taxable capacity of the state i for the considered period of time t (Formula 2).

The calculation results of the integrated index of tax risk for the state i in the considered period of time t were performed by means of Formula 3. Tax security of OECD countries has been calculated by Formula (4) and the results are presented in Table 1.

The growth rate of tax security indicator shows increasing tendency for tax security of the countries. Table 1 shows that in 2014 the highest level of tax security is seen in the following countries: Denmark, Norway, Finland, Belgium, Sweden and Austria. These countries have consistent and stable high standard of living of the population. Therefore, we can say that the state of tax system ensures the interests of business,

Tab. 1: **Tax security of OECD countries**

Country Name	2009	2010	2011	2012	2013	2014
Australia	0.864863	0.839935	0.832724	0.837294	0.856213	0.62194
Austria	1.084	1.1037	1.10402	1.1006	1.1003	**1.1424**
Belgium	1.143	1.1606	1.165491	1.1713	1.1751	**1.2175**
Great Britain	0.991	0.9945	0.993031	1.0010	0.9945	1.0105
Hungary	1.087	1.0961	1.078283	1.0231	1.0139	1.0602
Germany	1.015	1.0392	1.0417	1.0298	1.0385	1.0801
the Netherlands	1.015	1.0236	1.0328	1.0285	1.0118	0.6725
Greece	0.908	0.9131	0.9198	0.9356	0.9620	0.9925
Denmark	1.441	1.4618	1.5215	1.5146	1.4869	**1.5331**
Israel	0.978	0.9327	0.9260	0.9302	0.9136	0.9471
Ireland	0.947	0.9276	0.9192	0.9138	0.9018	0.9594
Iceland	1.146	1.1050	1.1024	1.0838	1.0932	1.1351
Spain	0.971	0.9116	0.9170	0.9225	0.9249	0.9706
Italy	1.101	1.1195	1.1340	1.1293	1.1205	**1.1620**
Canada	0.977	0.9904	0.9934	0.9767	0.9732	1.0043
Luxembourg	1.042	1.0908	1.1182	1.1008	1.0895	1.1337
Mexico	0.734	0.7527	0.7194	0.7373	0.7405	0.6958
New Zealand	1.049	1.0340	1.0114	1.0009	1.0087	1.0476
Norway	1.255	1.2825	1.2922	1.3063	1.2975	**1.3006**
Poland	0.973	0.9537	0.9206	0.9218	0.9232	0.5813
Portugal	0.949	0.9457	0.9329	0.9587	0.9588	1.0214
Slovakia	0.875	0.8644	0.8552	0.8505	0.8486	0.8930
Slovenia	1.010	1.0188	1.0295	1.0206	1.0056	1.0348
USA	0.848	0.8104	0.7992	0.8119	0.8275	0.8853
Turkey	0.811	0.8218	0.8374	0.8666	0.8608	0.9057
Finland	1.184	1.1976	1.2029	1.2030	1.2155	**1.2540**
France	1.035	1.0287	1.0268	1.0397	1.0554	1.1064
Czech Republic	0.961	0.9528	0.9456	0.9466	0.9518	0.9918
Chile	0.824	0.7552	0.7744	0.8056	0.8185	0.8325
Switzerland	0.874	0.9064	0.9179	0.9137	0.9108	0.9382
Sweden	1.190	1.1842	1.2068	1.1787	1.1465	**1.1693**
Estonia	0.947	0.9787	0.9995	0.9565	0.9462	0.9874
South Korea	0.778	0.7707	0.7640	0.7773	0.7849	0.8139
Japan	0.854	0.8358	0.8311	0.8450	0.8567	0.7938

Source: Calculated by the authors by Formula 4

society and the nation, and forms tax security of a country. Thus, the proposed method is appropriate for comparative evaluation of countries' tax security.

According to forecast information of IMF, the average level of the tax burden on the economy in the countries that are members of OECD in 2016-2018 planned to be 34.3-35.3% to GDP.

In terms of crisis in 2014-2015, because of the impairment of economic situation, the reduction of tax proceeds is registered in the many countries of OECD. It is obvious that the anti-offshore regulation is becoming an important trend of the national tax security and of the international anti-crisis programs.

Among the main directions of the formation of the tax security of different countries, the following directions should be selected:
- the control on offshore jurisdictions for the purpose of inducing to the information-legal co-operation;
- the conclusion of the number of bipartite tax agreements conforming to the Model Tax Convention of OECD, and conforming to the special agreements about the exchange of information in the tax sphere;
- the intensification of the superintendence for companies and banks which are supported by the government.

The Group of Twenty (G20) and OECD assumed the basic work about the intensification of the international co-operation in the taxing sphere. Herewith G20 develops the whole strategy of coordinated anti-offshore politics and OECD works out the details of the main actions of the influence on offshore jurisdictions.

Besides, proceeding from the necessity of the amendment of the investment climate and making conditions for the economic expansion, the members of OECD decided not to allow the tax-load growth in the nearest future, and if it is possible, to use all possibilities for its reduction (for a small business and for new investment projects).

5. Conclusion. In the paper there have been refined methodological approaches to the formation of modern trends of tax security for the purpose of increasing governmental tax policy efficiency. The advantage of the proposed methodology is the use of publicly available information on the three most important indicators of tax policy efficiency. Thus, the offered methodology is acceptable for the comparative valuation of the tax-security of the states.

References

1. Afanasyeva, L. V. (2015). Budgetary and fiscal security: G7 and Russia. *Izvestiya Yugo-zapadnogo gosudarstvennogo universiteta. Seriya: Ekonomika. Sotsiologiya. Menedzhment (Southwest State University Bulletin. Series of Works: Economy. Sociology. Management), 1,* 58-63 (in Russ.).
2. Litvinenko, A. N. (2013). Economic and national security: the problem of correlation of concepts. *Nauchno-technicheskie vedomosti gosudarstvennogo politechnicheskogo universiteta (Scientific and Technical Sheets of State Polytechnic University. Economics), 3,* 9-15 (in Russ.).
3. Plotnikov, V. A., & Vertakova, Yu. V. (2010). Management reproduction process in the region on the basis of the harmonic proportions. *Izvestiya Irkutskoi gosudarstvennoi ekonomicheskoi akademii (Herald of ISEA), 5,* 89-93 (in Russ.).
4. Senchagov, V. K. (2010). The economic national security. *Vestnik ekonomicheskoi bezopasnosti (Herald of Economic Security), 8,* 31-41 (in Russ.).
5. Fischhoff, B., Watson, S., & Hope, C. (1984). Defining risk. *Policy Sciences, 17.*
6. Hudson, W. (1996). *Economic Security for All: How to end poverty in the United States.* Retrieved from http:/shults.org/wadehudson/esfa
7. Wilett, A. H. (1901). *Economic Theory of risk and insurance.* London: P.S. King&Son.
8. Musgrave, R. A., & Musgrave, P. B. (2009). *Public Finance: Theory and Practice.*
9. Shah, A. (1994). *Reform of Intergovernmental Fiscal Relations in Developing and Emerging Market Economies.* Washington, D.C.: World Bank.
10. Balatsky, E. V. (2003). Analysis of the impact of the tax burden on economic growth through production and institutional functions. *Problemy i prognozirovaniye (The Problems of Forecasting), 2,* 88-105 (in Russ.).
11. Goncharenko, L. I., & Arhiptseva, L. M. (2011). Tax potential: factors of formation and development. *Nationalnye interesy: prioritety i bezopasnost (National Interests: Priorities and Security), 6,* 21-26 (in Russ.).
12. Mayburov, I. A. (2012). The tax system in Russia: the choice of further ways to reform. *Finance (Finance), 8,* 45-49 (in Russ.).
13. Panskov, V. G. (2013). VAT and strengthening local budgets. *Finance (Finance), 2,* 38-43 (in Russ.).
14. Sevriukova, L. V., & Trusova, N. C. (2014). State policy to promote investment activity in regions. *Ekonomicnij Casopis-XXI (Economic Annals-XXI), 9-10,* 106-107. Retrieved from http://soskin.info/en/ea/2014/9-10/contents_26.html *(in Russ.)*
15. Afanasyeva, L. V. (2014). Modern trends of fiscal policy in the context of globalization. *Upravleniye ekonomicheskimi sistemami (Management of Economic Systems).* Retrieved from http://uecs.ru/finansi-i-kredit/item/3296-2014-12-30-08-38-43 (in Russ.)
16. Afanasyeva, L. V., & Tkacheva, T. Yu. (2015). *Economic security.* Kursk: Southwest State University (in Russ.).
17. Tkacheva, T. Yu. (2013). *Harmonization of fiscal relations: the mechanism of adaptive tools and regional practice.* Kursk: Southwest State University (in Russ.).
18. Tkacheva, T. Yu., & Afanasyeva, L. V. (2012). The logical structure of the budget and study potential factors influencing its development. *Izvestiya Yugo-zapadnogo gosudarstvennogo universiteta. Seriya: Ekonomika. Sotsiologiya. Menedzhment (Southwest State University Bulletin. Series of Works: Economy. Sociology. Management), 2,* 170-176 (in Russ.).
19. Caati, T. (1993). *Making decisions. The method of analysis of hierarchies.* Moscow: Radio i Svyaz (in Russ.).
20. Podgornyy, B. B. (2013). Supply and demand on the Russian stock market: a socioeconomic analysis. *Sovremennye isledovaniya sotsialnyh problem: elektronnyi nauchnyi zhurnal (Modern Research of Social Problems: the Electronic Scientific Journal), 3*(23), 20 (in Russ.).

Institute of Society Transformation (IST)

Non-governmental Research & Analytical Centre, Director Dr. Oleh Soskin

Key activities:
- Organizing and holding of interactive workshops, roundtables, presentations
- Preparing of analytical materials, political and economical forecasts, commentaries and other intellectual products
- Organizing of study visits for state executives and business structures to states with stable democracy
- Realizing of public relations for organizations, companies, cities, regions
- Advisory work on current and strategic economical and political issues
- Publishing of research books (IST prepared and published 15 monographs)
- Publishing of The «Economical Annals-XXI» Journal
- Forming and supporting of IST's Internet holding (57 websites)
- Holding of on-line Internet conferences and polls etc.

Institute of Society Transformation has realized 85 large international projects.
IST created 16 regional Centres on European and Euro-Atlantic Integration.
Telephone/Fax: +38 044 235 98 28 (27), E-mail: os@osp.com.ua,
Internet: www.soskin.info, www.ist.osp-ua.info