

# Socioekonomické a humanitní studie

Studies of Socio-Economics and Humanities

1/2015 Volume 5



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VYSOKÁ ŠKOLA

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Banking Institute College of Banking

# Socioekonomické a humanitní studie

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## DETERMINING THE IMPACT OF THE TAX ADMINISTRATION QUALITY ON TAX COMPETITIVENESS OF THE COUNTRY

### POSOUZENÍ DOPADU KVALITY DAŇOVÉ SPRÁVY NA DAŇOVOU KONKURENCESCHOPNOST ZEMĚ

Nataliia Ievchenko, Larisa Sysoyeva, Iaryna Samusevych

#### ABSTRAKT

Provedený výzkum vedl k vývoji indexu kvality správy daní, který charakterizuje atraktivitu daňového systému země, z pohledu daňového poplatníka. Výpočet navržené indexu pro Ukrajinu a skupiny zemí střední a východní Evropy umožnil identifikovat zlepšení kvality daňové správy ve všech sledovaných zemích a zjistit sblížení úrovně kvality správy daní. Provedené výpočty pro stanovení spojení mezi kvalitou daňové správy a pohybem mobilních výrobních faktorů umožnily identifikovat existenci dlouhodobého dopadu na kvalitu správy daně a daňové konkurenceschopnosti země. To dokazuje význam kvality daňové správy jako nástroje pro rozvoj strategie daňové soutěže.

#### Klíčová slova:

přímé zahraniční investice, mobilní výrobní faktory, správa daní, daňová konkurence, daňová politika, daňová konkurenceschopnost země

#### ABSTRACT

Conducted research led to development of a tax administration quality index, which characterizes the attractiveness of the tax system of country from the standpoint of the taxpayer. Calculation of the proposed index for Ukraine and group of countries of Central and Eastern Europe allowed to identify improving the quality of tax administration in all surveyed countries, and to detect the convergence of the level of quality of tax administration. Calculations performed to determine the connection between the quality of tax administration and the movement of mobile factors of production allowed to identify the presence of long-term impact of the quality of tax administration on tax competitiveness of country, which proves the relevance of the use of the quality of tax administration as a tool for development the strategy of tax competition.

#### Keywords:

foreign direct investment, mobile factors of production, tax administration, tax competition, tax policy, tax competitiveness of country

#### JEL Classification:

E22, E62, H31, H32

## INTRODUCTION

With the growth of the integration of national economies there takes place an increase in the mobility factors of production which creates a background for intensification of the tax competition between countries for the movement of tax bases. The researches, conducted by P. Enss (2008), G. Fernandez (2001), J. Wilson (1999) allow noting that the reducing of the tax burden as a tool of increasing the attractiveness of the tax system is characterized by limitations because it can lead to a change in a positive effect on the negative. That is why the urgency of using the new directions of an increase the competitiveness of national tax systems, including the quality of tax administration which is noted by S. Matthews (2011) as one of key parameter of country's competitiveness.

Construction of optimal tax administration system should provide achievement of the objectives of the various subjects of tax process because for the taxpayer the important factor is not only the level of the tax rates but also the simplicity of procedure of paying taxes which affects the attractiveness of choice of the country of tax registration in the context of international tax competition. For the state, represented by the tax authorities, primary tasks are to ensure completeness of the total tax revenues which are paid to the different levels of a budget within a single country.

Thus, the aim of this article is to define the indicator of tax administration quality and research its impact on the tax competitiveness in terms of growth of tax bases through movement of mobile factors of production.

### 1. Theoretical approaches to the evaluation of tax administration system and its role in a tax competition

In a result of analysis of scientific literature that concerns of the evaluation of tax administration system it's necessary to highlight that most of publications devoted to the development of theoretical approaches to the comprehensive assessment of the tax administration system efficiency, including both quantitative and qualitative criteria.

In the context of definition the main targets of tax authority development we should pay attention on the Principles of Good Tax Administration, developed by OECD (2001), which provide that the increased of the effectiveness of tax administration should occur in a complex of several areas – relationship with taxpayers, relationship with employees of tax authorities, cooperation with other tax and non-tax organizations, development and adaptability of tax administration work. Consideration of these

principles in a process of improvement of the tax administration system allows balancing the related persons' interests to obtain long-term effects for the national tax system and country economy as a result.

Existing theoretical approaches to the estimation of tax administration quality provide its evaluation as a component of national tax system efficiency. The main indicators being proposed by different scientists for diagnosis a level of tax system administration activity are aggregated into Table 1. Analyzing the presented approaches, it is worth mentioning their complex character, which allows assessing the activities of tax authorities from the positions of various participants of the tax process.

In particular, we pay attention the concept, created by J. Gill (2000) for the assessment of revenue administration work, which provides diagnostic in seven areas. In a context of each direction author defines the possible disadvantages and offers solutions to elimination of indicated problems. It is necessary to highlight that J. Gill's concept has rather theoretical character, so it cannot be used for quantitative estimation of tax administration system activity.

G. Jakštonytė, L. Giriūnas (2011) propose to evaluate the tax administration system efficiency by three groups of indicators: taxpayer indicators (8 components), tax administrator indicators (4 components) and legislative base indicators (6 components). Calculation the values of indicators included in this approach allows determining problems in key areas of the tax system development in a context of providing of completeness of tax revenue, so it has macroeconomic orientation.

The proposals developed by I. Skackauskienė (2010) for the formation of tax system evaluation model, include the group of indicators for estimation of directly tax administration system functioning, that concerns both qualitative and quantitative parameters and allow evaluating, in the first place, taxing authority work.

A key disadvantage of existing theoretical approaches in terms of opportunities of their practical application is the complexity of calculations and limited disclosure of statistical information about the activities of tax authorities, which leads to necessity of development of more available methods to determine the tax administration system quality. Besides, taking into consideration that the main task of our research is estimation of the quality of tax administration in a context of tax competition, it is advisable to concentrate on the evaluation of tax administration from the perspective of taxpayers.

Increasing the integration processes and the development of innovative technologies in the global economy leads to a blurring of boundaries and increasing mobility of factors of production that provokes interstate compe-

tion for expanding their sources of income, resulting in changes in national laws in facilitating business. Phenomenon of tax competition provides the development economic methods of attracting foreign source income.

The study of scientific studies on the analysis of interstate tax competition models suggests that using tax rates to increase tax competitiveness of country is limited, therefore other factors are emerging as instruments of tax competition. Table 2 presents the instruments of tax competition in condition of mobility different factors of production, that non concern the reducing on tax rates, identified by researchers.

The conducted researches revealed the relevance of the use of different tools in order to increase the attractiveness of the country in the process of interjurisdictional tax competition. In particular, we note the results obtained by D. Wildasin (1988), R. Gordon, G. Wilson (2002) that prove the existence of influence the effectiveness of fiscal policy on the movement of mobile factors of production such as labor and capital. These results confirm urgency studying the role of quality of tax administration in improving tax competitiveness of country.

## 2. Determination of relationship between tax administration quality and attractiveness of the tax system of Ukraine in the context of tax competition

In order to determine the feasibility of using the quality of tax administration as a tool of international tax competition, it is necessary to research its relationship with indicators of the dynamics of mobile tax bases for one country economy (partial analysis of tax competition), what was realized on example of Ukraine. As mobile factors of production was chosen several indicators – total amount of foreign direct investment in Ukraine, the total number of taxpayers in the country (that determine the fluctuation of the tax base for the taxation of income, profits and capital) and net interstate migration (a factor of change of the dynamics of the tax base for the taxation of labor).

Table 2: Using the instruments of tax competition, different from tax rates, described in scientific research

Autor	Mobility of factors of production		Instruments
	Labor	Capital	
H. Kind, K. Midelfart-Knarvik, G. Schjelderup (2000)	Immobile	Mobile	Providing subsidies to firms
A. Hauffer, I. Wooton (2007)	Mobile	Not researched	Increasing the effectiveness of fiscal policy
D. Wildasin (1988)	Mobile	Mobile	Reducing government wastefulness
R. Gordon, G. Wilson (2002)	Mobile	Mobile	
R. Gordon, G. Wilson (2002)	Mobile	Mobile	

Source: composed by authors' based on [4],[5],[7],[14]

Table 1: Scientific approaches to the assessment of tax administration system

Author	Indicators
J. Gill (2000)	Revenue administration environment
	Revenue administration resources
	Revenue administration history
	Revenue administration strategy
	Revenue administration transformation processes
	Revenue administration outputs
	Revenue administration feedback mechanism
	Tax culture
	Erosion index
	Index of lag in tax collection
	Tax concealment potential
	Fiscal accounting inaccuracy
	Tax avoidance potential
	Fiscal change index
Fiscal knowledge index	
Tax administrator work efficiency	
G. Jakštomytė, L. Giriūnas (2011)	Tax administrator morality level
	Administration efficiency indicator
	Index of expenditures dedicated to tax administration
	Burden index
	Collection expenditure index
	Fiscal policy index
	Fiscal revenue administration proportionality index
	Legislation interpretation limitation index
	Elasticity index in respect of macroenvironment
	Quality of assistance provided by tax administrators
	Ratio of administrative costs to tax revenues
	Tax gap
	Corruption index
	Type of taxes
Efficiency of the tax administrators' activities	
I. Skackauskienė (2010)	Mode of organization of the revenue administration
	Overall organization of the revenue administration
	Risk of detection of tax evasions and strictness of consequences of tax evasion
	Ratio of the number of filled in tax returns to the number of taxpayers
	Ratio of expenditure for enforcing tax liabilities of taxpayers to the paid in taxes

Source: composed by authors based on [3], [6], [11]

The quality of the tax administration system is proposed to evaluate by calculating the integral index. In the context of this research primary importance have determining the quality of the tax administration system from the standpoint of the taxpayer, which leads to the selection of indicators for evaluation. To calculate the integral index of quality of tax administration in Ukraine were nine indicators chosen according to the available statistical information of the Tax Service of Ukraine and the World Bank. Indicators, chosen for the calculation of the integral index, were divided into two groups, one of which summarizes the qualitative parameters of the tax administration system, and the other includes quantitative indicators (see Table 3).

The first group of indicators includes two criteria that characterize the quality of the tax administration in terms of taxpayers and employees of tax authorities. Calculation of these indicators based on the results of survey conducted among these subjects. The first indicator is constructed as the average level of evaluation of tax

administration from taxpayers position – activities of tax authorities; the current system of taxation; changes in the relations between taxpayers and tax authorities, which generally illustrates the overall level of satisfaction of taxpayers to the conditions of taxes payment. The second indicator is constructed as the average level of evaluation of internal organization of the tax administration system by tax authorities employees on the following criteria – content, organization and working conditions; cooperation and exchange of information; management activities; staff development, that reflects the quality of internal management of the tax authorities and available potential for their development to the fullest possible fulfillment tasks. It should be noted that all indicators of this group have a direct connection with integral index, i.e., their growth has a positive effect on improving the quality of the tax administration system.

The second group of indicators includes quantitative criteria that characterize the process of tax administration. First of all, there is the number of hours spent by taxpa-

**Table 3: Characteristic of the main indicators of tax administration quality index**

Indicator	Description	Source of statistical information
<b>Evaluation tax administration quality by taxpayers</b>	Average value of estimation tax administration system by the criteria of tax authorities work, simplicity of the tax system of the country and changes in the relationship between taxpayers and tax authority	State Fiscal Service of Ukraine
<b>Evaluation of the tax authority work organization by employees of tax authorities</b>	Average value of estimation management of tax authority by the criteria of organization and conditions of tax work, level of cooperation and information exchange between tax and non-tax authority, top management activities and conditions for staff development	State Fiscal Service of Ukraine
<b>Time to prepare and pay taxes</b>	Time in hours per year for preparing and paying corporate income tax, value added tax, payroll taxes and social security contributions	The World Bank
<b>Tax payments</b>	Total number of taxes paid by businesses, including electronic filing (the tax is counted as paid once a year even if payments are more frequent)	The World Bank
<b>Share of overdue tax declarations</b>	Total number of overdue tax declaration to the total number tax declaration submitted in time ratio in the country	State Fiscal Service of Ukraine
<b>Number of scheduled tax audits</b>	Total number of planned tax inspections conducted in the country during the fiscal year	State Fiscal Service of Ukraine
<b>Number of unscheduled tax audits</b>	Total number of unplanned tax inspections conducted in the country during the fiscal year	State Fiscal Service of Ukraine
<b>Taxpayers' lawsuits to the tax authority</b>	Total number taxpayers' lawsuits for invalidation of tax authority decisions	State Fiscal Service of Ukraine
<b>Share of tax debt in tax revenue</b>	Total amount of debt collected during the fiscal year to the gross revenue collections for all taxes administered	State Fiscal Service of Ukraine

Sources: composed by authors' used [12], [13]

yers to prepare and pay taxes, which should be minimal in terms of transparent and simple tax administration system and the number of tax payments during the year, reducing the value of which also suggests simplifying the process of paying taxes for payers. Indicator of overdue and timely submitted tax declarations ratio reflects not only the tax culture of taxpayers, but also the simplicity of declaration forms and availability the information about the necessity and deadline of the submission for taxpayers, accordingly, its reduction is a characteristic of good tax administration. Indicators of scheduled and unscheduled tax inspections reflect the level of administrative burden for taxpayers; in addition, the number of audits characterizes grounds for the tax authorities doubt tax laws compliance by taxpayers. Perfect system of tax administration provides reducing the values of these indicators. Indicator number of lawsuits of taxpayers to invalidate decisions of tax authorities reflects the level of incompetence of the tax authorities in the implementation of the tax, and therefore its reduction positively characterizes system of tax administration. The indicator of the amounts of additional accruals, penalties and forcibly collected tax debt in the amount of tax revenue as an indicator of the quality of the tax administration has reduced, because of its perfect condition provides timely recovery of tax liabilities and penalties should have not fiscal but regulatory character.

Indicators which are taken into account in the construction of the tax administration quality index, are characterized by different units of measure, so it is necessary to normalize indicators for the calculations. For the normalization of indicators was used a minimax method. This method allows taking into account the multidirectional the impact of indicators for change of the integral tax administration quality index and neutralizing the impossibility of determining the optimal level of majority indicators. Using of which methods provides separation of indicators on the stimulants, growth of which leads to an increase in the integral index (in this research stimulants are the indicators belonging to the first group) and destimulants, the growth of which causes a reduction of the integral indicator (indicators of the second group).

Normalized values of indicators, which are stimulants calculated by the formula:

$$\bar{x}_i = \frac{x_i - x_{min}}{x_{max} - x_{min}} \quad (1)$$

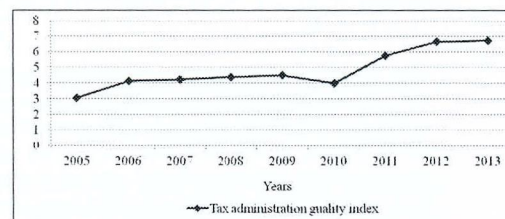
where  $x_i$  = current value of the indicator,  
 $x_{max}$  = maximum value of the indicator in the sampling of data,  
 $x_{min}$  = minimum value of the indicator in the sampling of data.

Accordingly, to calculate the normalized values for indicators, which are destimulants used the formula:

$$\bar{x}_i = \frac{x_{max} - x_i}{x_{max} - x_{min}} \quad (2)$$

The dynamics of the tax administration quality index in Ukraine calculated by summation of the normalized values of indicators during analyzing period is presented on Figure 1. It should be mentioned that as a result of application of the normalization of indicators take the value 1 in the period in which their level is best in terms of quality of tax administration and 0, in year which he recorded the worst value, so maximal level of tax administration quality index may be 9 and minimal level may be 0.

Figure 1: Dynamics of the tax administration quality index in Ukraine during 2005-2013



Source: Authors' calculations

Analyzing the dynamics of the calculated index, we can conclude the gradual simplification of tax administration in Ukraine from the standpoint of the taxpayer. The most significant results in this direction were observed period 2011-2013, which is probably connected with adoption of the Tax Code and simplification of the tax administration procedure especially at the legislative level.

In order to study communication of tax administration and indexes of the functioning of the country in the context of tax competition the correlations between the tax administration quality index and economic development indicators that have an impact on the dynamics of tax bases in the country was calculated (Table. 4).

Table 4: Results of calculation of correlation between the tax administration quality index and parameters, which determine of the dynamics of tax bases

	Tax Administration Quality Index
Foreign Direct Investments	0,8820
Number of Entities	0,8569
Migration Balance	0,8088

Source: Authors' calculations



Thus, it was discovered that increasing the quality of tax administration in Ukraine is closely related to the increase in foreign direct investment (which determines the expansion of economic activity of legal entities and respectively the growth of the tax base and tax payments to the government). Also it is increasing the total number of entities (increase the number of registered taxpayers is a prerequisite for the growth of tax revenues) and the inflow of population in Ukraine (which generate more tax revenues from personal income tax).

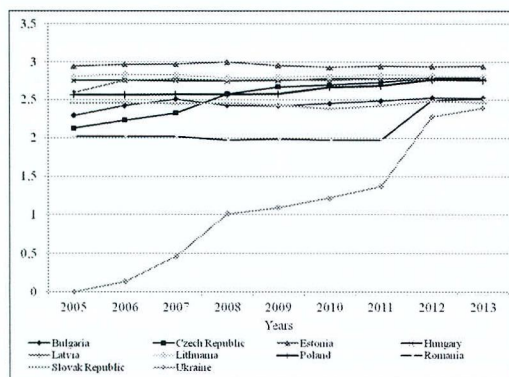
The received results allow putting forward a hypothesis that the presence of impact of the quality of tax administration on the mobility of factors of production in conditions of tax competition. In order to study the hypothesis, takes actuality of cross-country analysis to identify the role of tax administration as a tool of tax competition.

### 3. Determining the impact of the tax administration quality on the distribution of foreign direct investment in Central and Eastern Europe

Cross-country evaluation allows at the same time to evaluate the interaction of the tax administration system in several countries in terms of its tax competitiveness (complete analysis of tax competition consequences).

For analysis purpose there was formed the selected of panel data for 10 countries of Central and Eastern Europe, which are close in terms of economic development, and therefore are the competitors to attract mobile tax bases (Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic, Ukraine) for the period 2005-2013 years.

Figure 2: Dynamics of the tax administration quality index in Central and Eastern Europe during 2005-2013



Source: Authors' calculations

According to available statistics, tax administration quality index was based on the three indicators – the number of hours spent by taxpayers to prepare and pay taxes, the amount of tax payments during the year, the ratio of the amounts of additional accruals, penalties and compulsorily collected tax debt to the amount of tax revenue. Source of statistical information for two first indicators is a World Bank, while the calculation of share of tax debt in tax revenue based on OECD data. Normalization of indicators was conducted using the formula 2 to determine the maximum and minimum values of indicators in total for the aggregate countries data for the period of research in order to consideration not only the dynamics of the indicator, but also the level of its differentiation between countries.

The estimated value of the correlation between the tax administration quality index which was calculated for Ukraine on the basis of three indicators and pre-calculated index of quality of tax administration based on nine indicators is 0.9142. This demonstrates the ability of reduced index, fully represents the functioning of the tax administration system. The dynamics of the calculated tax administration quality index for the researched countries is presented on Figure 2.

Analysis of the calculated values of the tax administration quality index for the sample of researched countries allows us to highlight that the highest value of the index among the countries has Estonia, and its fluctuations during the observed period are insignificant. In addition, the consistently high level of the quality of tax administration for entities-taxpayers is registered in such countries as Lithuania, Hungary, Latvia and Poland. Comparatively high values of the researched indicator are shown by such countries as Czech Republic, Bulgaria and Slovak Republic, however, the presence of more dynamic changes of the tax administration quality index is observed in these countries. Ukraine and Romania are characterized by the lowest level of the researched index, however, an upward trend of index during the observation period is positive. The revealed trend of researched index allows us to make a conclusion that there is an activation of the convergence processes in tax administration systems of selected countries during the period of observation.

At the same time, comparing trends in the levels of indicators, which are components of tax administration quality index (see Appendix), can note that the number of hours to prepare and pay taxes is lowest for such countries as Estonia, Lithuania, Romania, Slovak Republic. The most positive values of the number of tax payments observed in Estonia, Latvia, Lithuania, Hungary and the Czech Republic, while the lowest level of tax debt ratio to total tax collections is

typical for Estonia, Poland, Hungary and the Czech Republic. These tendencies suggest that the process of improvement of tax administration concerns different aspects in some countries that confirm the necessity of comprehensive assessment of tax administration quality.

Taking into consideration the fact that the indicators, which are included in the calculation of the tax administration quality index in the case of Central and Eastern European countries are characterized, first of all, through the impact on the conditions of business entities operation, it is appropriate to determine the role of the tax administration quality in the process of country's tax competitiveness on the base of the assessment of tax administration impact on the process of mobile capital movement and allocation.

The resulting indicator, which reflects the mobility of tax bases between the countries in this research, is the share of foreign direct investments received by a separate country in total volume of direct foreign investments in the set of countries in the context of the studied years. This parameter illustrates the final result of tax competition between countries for mobile capital.

Taking into consideration existing differences between countries surveyed in terms of orientation to foreign economic activity (level partnerships and economic relations with other countries), as control variables in the model included an indicator of trade openness, which was calculated as a share the total volume of exports and imports goods and services in GDP according to the methodology of the World Bank.

For assessment of tax administration quality influence on capital movement in Central and Eastern Europe used autoregressive distributed lag model (ARDL), for calculation that was chosen pooled-mean group estimator (PMG), which allows identifying long run common effect for the group of countries and average effect in the short run. This instrument is optimal for analysis of the relationship between variables that change over time in the context of groups (in these case countries) which have individual characteristics that may determine the factor variable fluctuation. Process of evaluation was realized using Stata software. The results of estimation long-run and short-run common effects for Central and Eastern Europe countries are presented in Table 5.

The results of calculations allow identifying a statistically significant positive impact of increasing the quality of tax administration to the growth of the share of FDI in Central and Eastern Europe in the long run. Openness of the economy is a factor which intensifies demonstrated

**Table 5: The results of estimation tax administration quality index influence on foreign direct investment distribution in Central and Eastern Europe**

Variables	Impact on foreign direct investment distribution			
	Long-run effect		Short-run effect	
	Coef.	Std. Error	Coef.	Std. Error
<b>Tax administration quality index</b>	0,0708*** (6,37)	0,0111	-0,2938 (-1,28)	0,2294
<b>Trade openness</b>	0,0004*** (2,71)	0,0001	0,0009 (0,62)	0,0015

Note: t-statistics are in parentheses. \*\*\* indicates significance at the 1% level  
Source: Authors' calculations

effect. Therefore, we can make a conclusion that in the process of developing a strategy increasing the tax competitiveness of the country should take into account both tax and non-tax factors of the national economy functioning. At the same time, the estimation of short-term common effect for the investigated group of countries is not allowed to get statistically significant results, confirming the fact that the result of the improvement of the tax administration system is deferred in time, so this parameter of tax system as an instrument of tax competition has rather strategic than tactical character.

The chosen estimator allows also evaluation of the short-term impact of quality of tax administration on the distribution of FDI by countries (see Table 6).

Calculation results show the statistically significant relationships only in certain countries (Czech Republic, Estonia and Romania). Pay attention to the fact that the identified relationships demonstrate the negative impact of the tax administration quality on the share of foreign direct investment into the country. This makes it possible to conclude that, first, owners of capital make decisions about its investing not only based on easing of tax administration process, but they take into account also other factors of attractiveness of a country for investment (for example, Estonia is a leader by the level of the tax administration quality index, but receives enough low share of FDI in relation to other countries in the study group); secondly, changes of the tax administration system in the short term may have a negative effect from the standpoint of taxpayers who are aware of this process as instability of the tax system (during the analyzed period in Czech Republic and Romania fairly significant changes in values of some indicators, which are included in the calculation of the tax administration quality index is observed).

**Table 6: The results of estimation of tax administration quality index influence on foreign direct investment distribution in Central and Eastern Europe by countries in a short term**

Country	Variables	Impact on foreign direct investment distribution	
		Coef.	Std. Error
Bulgaria	Tax administration quality index	0,1512 (0,77)	0,1972
	Trade openness	-0,0007 (-1,27)	0,0005
Czech Republic	Tax administration quality index	-0,6350** (-2,08)	0,3050
	Trade openness	-0,0017 (-0,67)	0,0025
Estonia	Tax administration quality index	-0,7150*** (-5,35)	0,1336
	Trade openness	-0,0003 (-1,45)	0,0002
Hungary	Tax administration quality index	-2,0609 (-0,41)	5,0830
	Trade openness	0,0139 (1,26)	0,0110
Latvia	Tax administration quality index	0,0510 (1,50)	0,3390
	Trade openness	0,0016*** (4,80)	0,0003
Lithuania	Tax administration quality index	0,0863 (0,65)	0,1318
	Trade openness	0,0003 (0,80)	0,0003
Poland	Tax administration quality index	0,5795 (0,30)	1,9509
	Trade openness	0,0002 (0,01)	0,0170
Romania	Tax administration quality index	-0,2221*** (-3,12)	0,0711
	Trade openness	-0,004*** (-2,15)	0,0019
Slovak Republic	Tax administration quality index	-0,0133 (-0,43)	0,3106
	Trade openness	0,0004 (0,53)	0,0007
Ukraine	Tax administration quality index	-0,0405 (-1,64)	0,0247
	Trade openness	-0,0001 (-0,17)	0,0008

Note: t-statistics are in parentheses. \*\*\* indicates significance at the 1% level; \*\* indicates significance at the 5% level  
Source: Authors' calculations

Conducted research allows asserting the important role of the quality of tax administration as a tool of tax competition. Taking into consideration the long-term impact of tax administration quality index on the distribution of FDI, its implementation should be in the context of the development of the tax competitiveness strategy of the country.

## CONCLUSIONS

Strengthening the role of tax competition between countries increases the relevance of search for new instruments for attracting mobile factors of production, one of which is the system of tax administration that can be assessed from the standpoint of the various participants of the tax process. Existing theoretical approaches to the evaluation of tax administration provide its comprehensive assessment that characterizes the system of tax administration by its general efficiency for the national economy of the country. But according to the purpose of the research more interesting is the quality of tax administration for taxpayers because it can be a factor of influence on decision making about choosing the country for work or business activity.

Consequently there is the necessity of development of an integrated tax administration quality index, which is based on the assessment of the factors that characterize the simplicity, transparency and fairness of tax administration to taxpayers and further evaluation of its impact on the movement of mobile factors of production. The practical application of the developed index provides partial and complete analysis according to the basic neoclassical model of tax competition.

Partial analysis was conducted for Ukraine. The calculations for Ukraine predicted determining the dynamic performance, which includes nine indicators that characterize different aspects of the relationship of taxpayers and tax authorities. Discovered trend of the calculated values led to the conclusion of a gradual increase in the quality of tax administration. This trend also indicates an increase of attractiveness of the national economy of Ukraine for economic activity. Detected thesis confirmed the calculated values of correlation coefficients with the following indicators – migration balance (0,8088), number of entities (0,8569), amount of FDI (0,8820), which indicating the presence of statistically significant positive relationship between the growth of the quality of tax administration and increasing the volume of mobile factors of production placed in Ukraine.

Partial analysis cannot adequately define the role of specific factors in increasing the volume of factors of production in the country, because the considered overall effect takes into account the general conditions for economic activity. Therefore to verify the significance of

obtained results there was conducted a complete analysis for a set of countries of Central and Eastern Europe. Taking into account the available statistics, the number of indicators that are included to the tax administration quality index, was reduced to three, which, however, did not lead to a reduction of its informality (level of correlation between the two indexes calculated for Ukraine amounted to 0,9142). Used method of index calculation provides a gradation of its level both in terms of period and by the countries that allows analyzing the total dynamics of the sample.

The calculation results allowed concluding the convergence of the quality of tax administration in Central and Eastern Europe, which may be both a result of the general development of integration processes and harmonization of tax legislation and the consequence of tax competition. This analysis of the dynamics of normalized values of the components of general index demonstrates the presence of significant differences between countries concerning some aspects of simplification the process of tax administration. It also can be a factor of influence on decision making of taxpayers according to their priorities.

Assessing the impact of the tax administration quality index on the movement of mobile production factors in the countries of Central and Eastern Europe was conducted using a share of foreign direct investment attracted to separate country, as the resulting indicator, in the total foreign direct investments received by a sample of the same period. As the method of assessment was chosen pooled-mean group estimator (PMG), which allows detecting common long-term and short-term effects for the group of countries. In a result of evaluation there was found that in the long term the growth of the tax administration quality index in the country by 1% leads to the increase the share of foreign direct investments attracted in its economy by 0,07% on average, which indicates the relevance of consideration the tax administration as an instrument of tax competition in a process of developing strategies of the state tax system.

Note that in the short term period the impact of the quality of tax administration on attracting mobile capital is insignificant for countries as a whole, however, the results, obtained for individual jurisdictions show a negative correlation, which creates reason to assert that improving the tax administration system has to be conducted with the development of other factors. Changes in legislation and administrative procedures should be systematic and consistent in order to avoid violation of the stability of the tax system as a whole.

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